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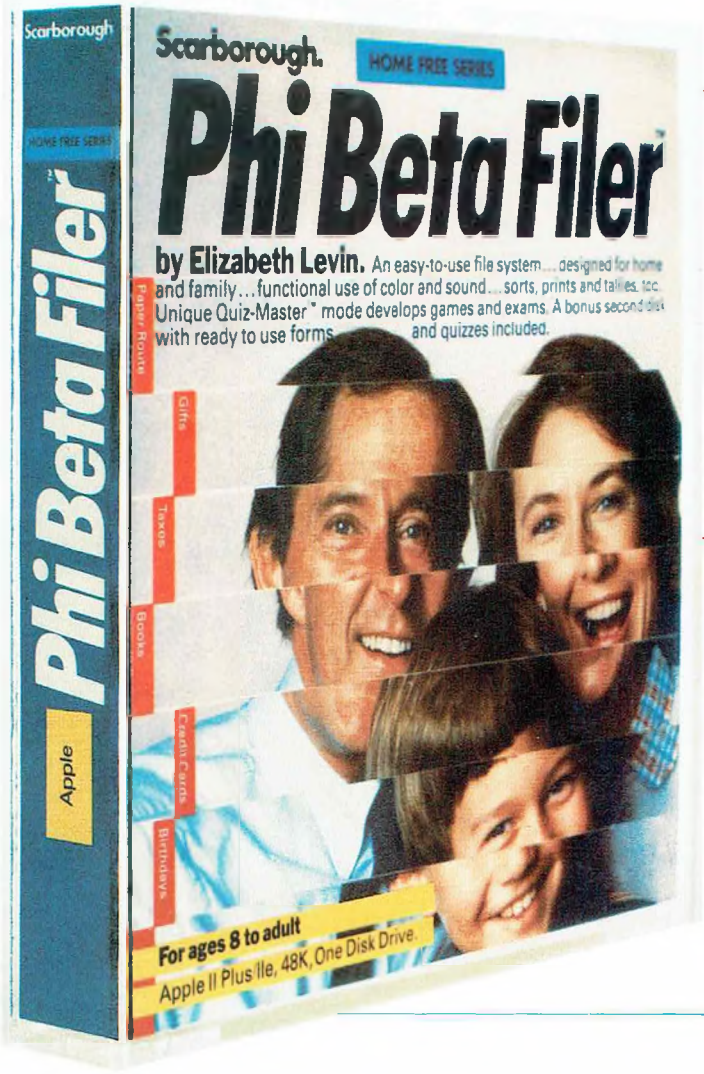

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Cover photograph by Bruce Pendeleton.
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Advertising Sales

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Claude P. Sheer
Creative Computing
Ziff-Davis Publishing Company
One Park Ave.
New York, NY 10016
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Advertising Coordinator
Chris Tice
Creative Computing
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Monkeynews

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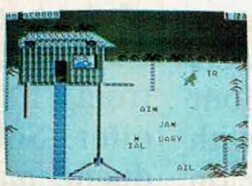
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Welcome To The Software Olympics

We have Olympic Fever. As we put this magazine together, the winter Olympics have just ended, and when you read it, the country should be nearing the height of its anticipation of the summer games in Los Angeles.

We all watched our skiers and skaters acquit themselves with speed, skill, grace, and daring, and we plan to support our participants in the summer Olympics with all the enthusiasm we can muster here on the opposite coast.

It was in this setting that we decided to use this year's Software Buyer's Guide to single out those programs that we think represent the best in software for personal computers.

Just as Olympic records and standards of only a few decades ago have been surpassed by today's fleeter, stronger, more precise athletes, so the software of a decade ago seems neolithic by today's standards. Minimum memory requirements of 48K are commonplace where 8K was once considered a king's ransom, and high-resolution graphics have become the sine qua non of the recreational and educational software that not many years ago relied on output from a Teletype machine.

The programs we have chosen to wear our Olympic laurels epitomize the state of the art in their respective categories. Like our Olympic athletes, they were culled from a field of the best the industry has to offer. Software manufacturers are producing many excellent programs, and just because a program was not chosen for one of our awards does not mean that it is an inferior product; without a body of high quality software to provide the impetus to excel, few of today's top programs would have been written.

We think that our medalists press the limits of the microcomputers now on the market. They combine utility, versatility, and that now famous quality, user-friendliness in software packages that make a personal computer worth having.

Betsy Staples

Flight Simulator II

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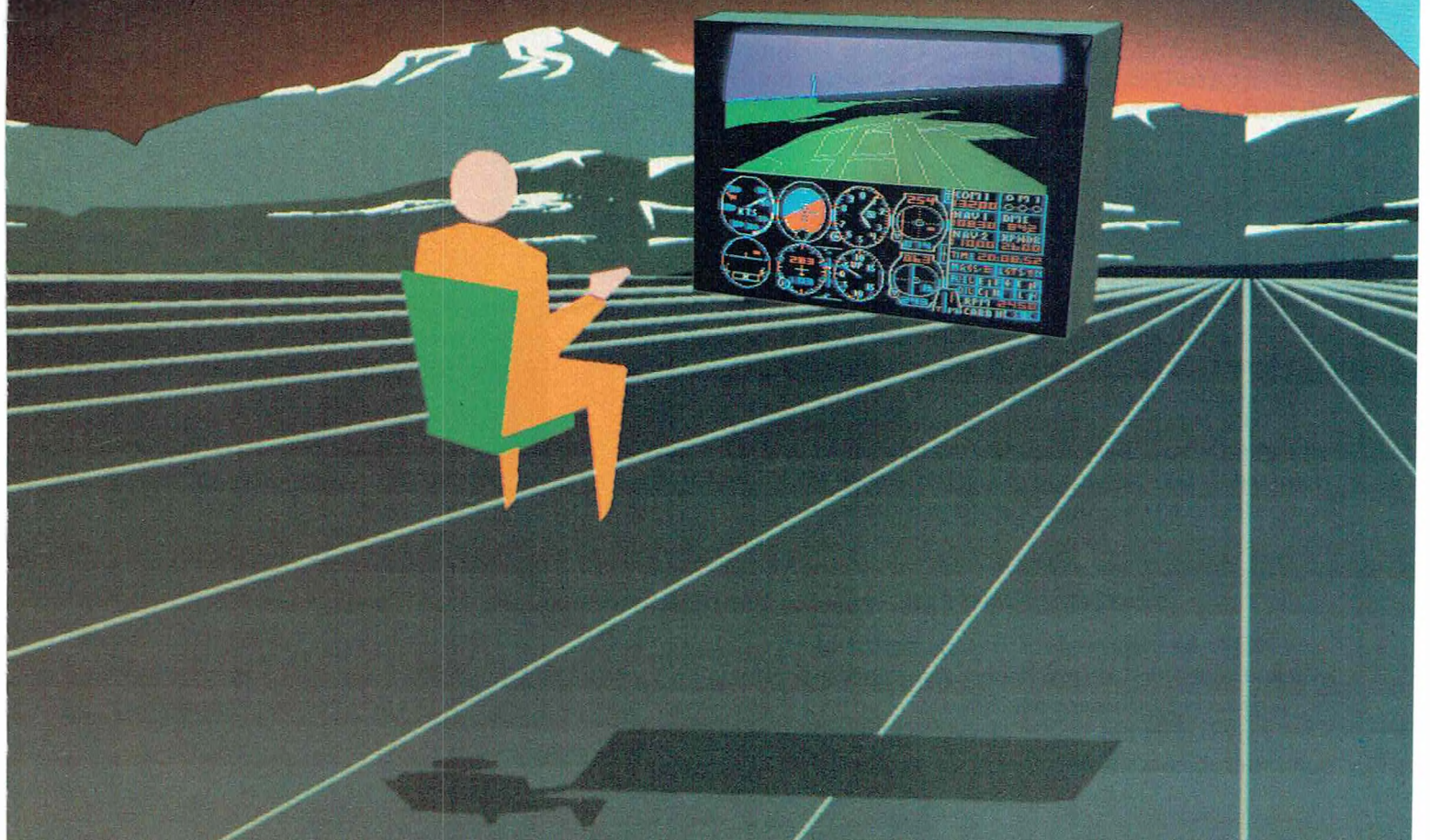

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What should you look for in personal

Before you go looking for personal computer software, you should know what personal computer software looks like.

(You're not alone if you don't already know that software programs come in a package.)

Programs are "pre-recorded" on cartridges, tapes or diskettes. And, although you can't tell by looking at these cartridges, tapes or diskettes, the programs on them can be very different.

What you put in is what you get out.

What happens when you play a high-quality tape on a high-quality recorder? Superior sound.

This analogy can also hold true with software. The better the program quality, the better the result —be it improved productivity or creativity.

IBM Personal Computer Software is both tested and approved by IBM. And these programs are designed to take advantage of an IBM personal computer's many advanced hardware features.

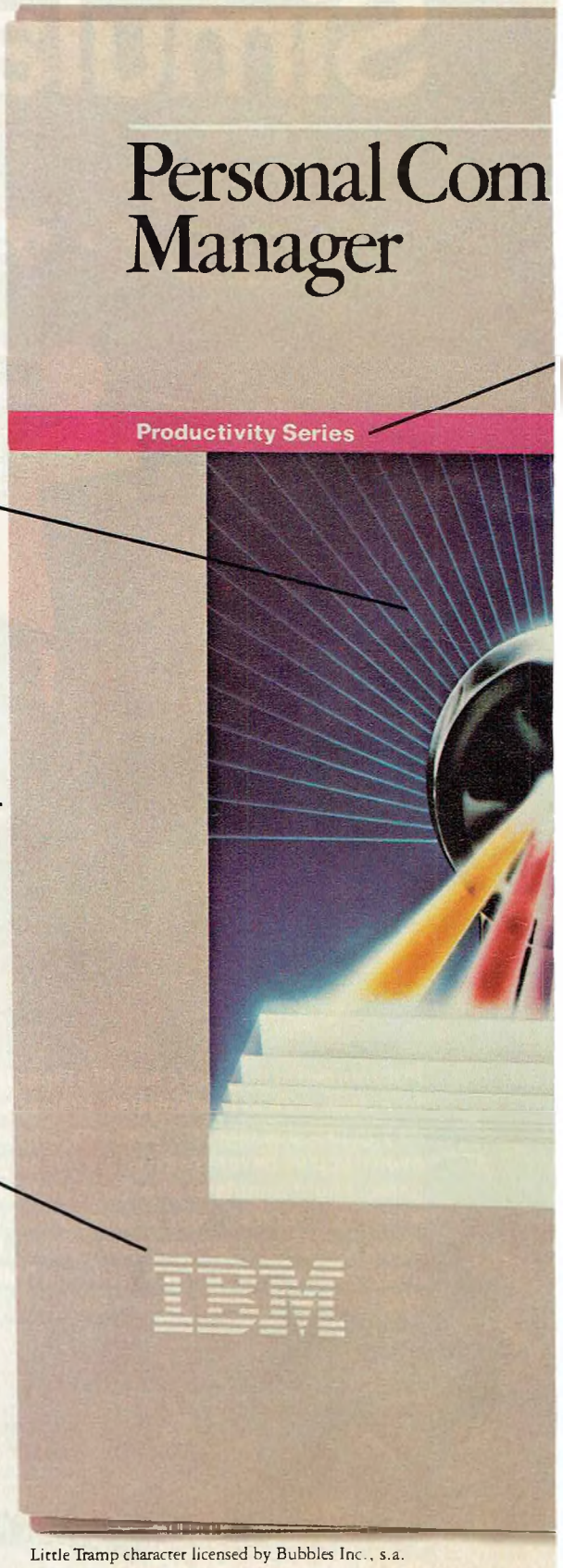
What the value is.

What are improved math skills worth? More efficient inventory control? Faster communications? What is accomplishment worth?

Any way you look at it, the value of personal computer software is the value of doing your best.

What compatibility means.

Many of the same software programs that run on the IBM Personal Computer you use at work will run on other IBM personal computers you use in other places. So you can, for example, continue in your family room what you started in the classroom or boardroom. (Or the other way around.)



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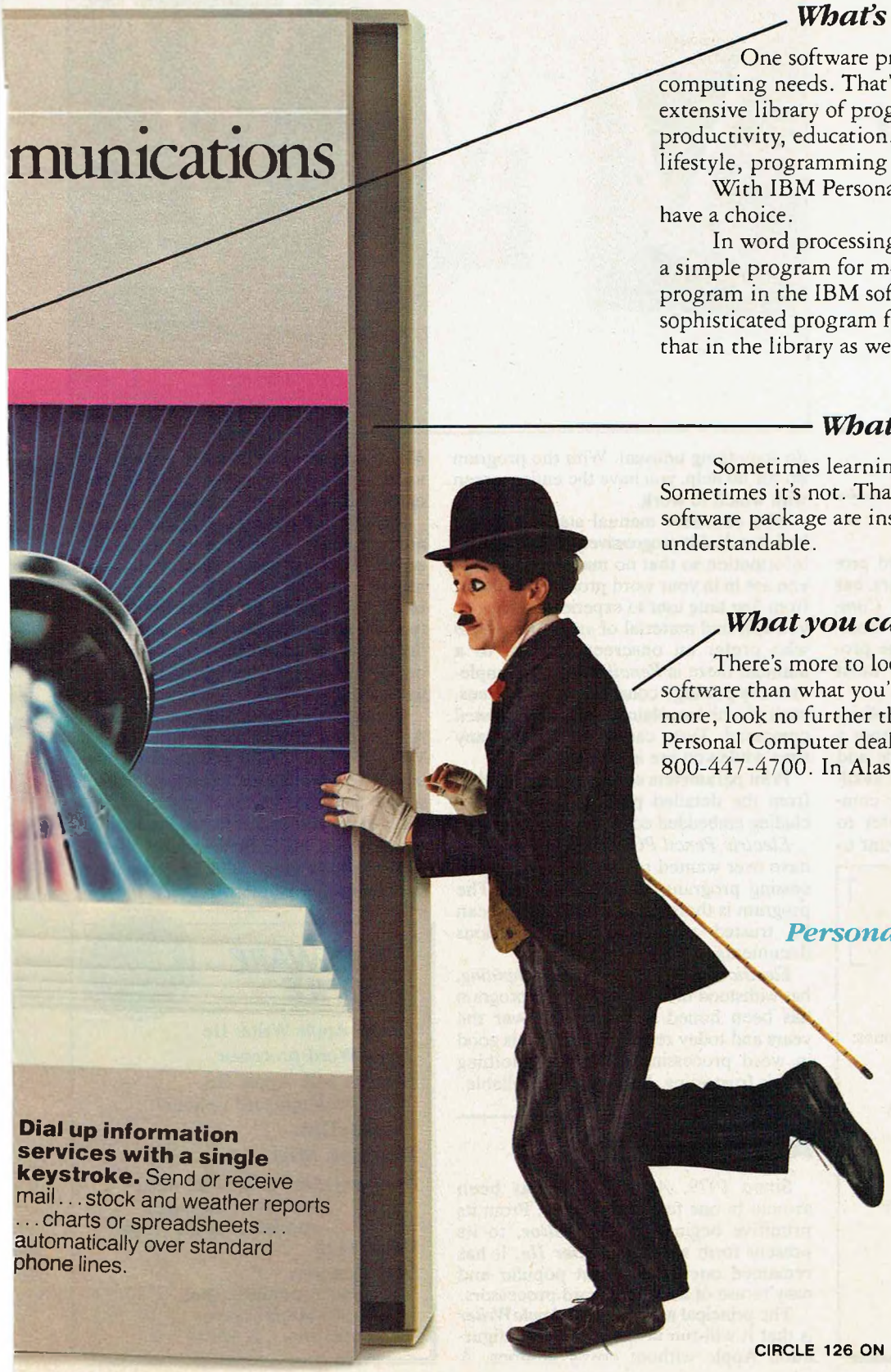
computer software?



What's available.

One software program can't satisfy everyone's computing needs. That's why IBM has such an extensive library of programs. You'll find a series for productivity, education, business, entertainment, lifestyle, programming or communications.

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What's inside.

Sometimes learning a program is easy. Sometimes it's not. That's why inside every IBM software package are instructions that are clear and understandable.

What you can do right now.

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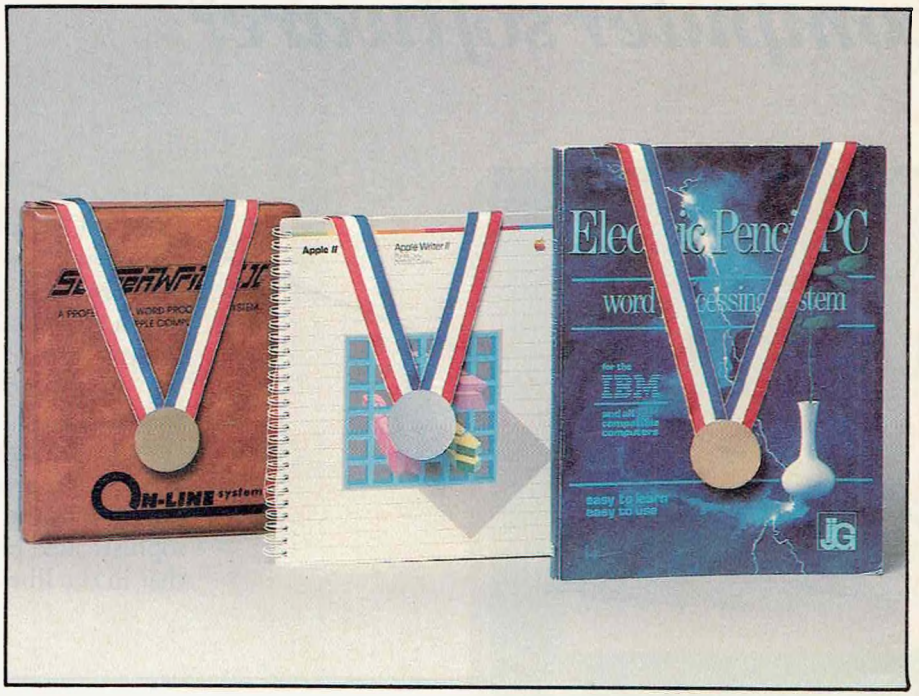

Betsy Staples

Electric Pencil PC

Electric Pencil, the original word processing program for microcomputers, has long been a favorite at *Creative Computing*. We have used it on many computers, but the latest edition of the program—for the IBM PC—is the most comprehensive and versatile of all.

The newest version of *Pencil* is simplicity itself to use. Four levels of help, from a complete list of editing commands and explanations to no help at all, are available, so that you can memorize the commands you use frequently and refer to the complete list only when you want to do something unusual. With the program set for no help, you have the entire screen with which to work.

The excellent manual starts with the basics and adds progressively more complex information so that no matter what stage you are in in your word processing career, from first time user to experienced hacker, you can find material of value. For those who prefer an onscreen tutorial to a manual, there is *Pencil Tutor*, a complementary package consisting of 62 screens, each of which explains in detail one *Pencil* command. *Tutor* can be accessed at any time while you are in edit mode.

Print parameters can be specified either from the detailed print menu or by including embedded commands in your text.

Electric Pencil PC can do anything we have ever wanted to do with a word processing program, and it is reliable. The program is thoroughly debugged and can be trusted with your most precious documents.

Electric Pencil, like *Creative Computing*, has withstood the test of time; the program has been honed and polished over the years and today represents all that is good in word processing and almost nothing that is frustrating, limiting, or unreliable.

SOFTWARE PROFILE GOLD

Name: Electric Pencil PC
Type: Word processor
System: 48K IBM PC and clones; PCjr
Format: Disk
Price: Electric Pencil PC, $299.95
Pencil Tutor, $49.95
Pencil Ace, $149.95
Summary: Reliable, easy to use program appropriate for home and office use.
Manufacturer:
IJG Inc.
1953 W. 11th St.
Upland, CA 91786
(714) 946-5805

AppleWriter IIe

Since 1979, *AppleWriter* has been around in one form or another. From its primitive beginnings as *Teditor*, to its present form as *AppleWriter IIe*, it has remained one of the most popular and easy to use of all Apple word processors.

The principal advantage of *AppleWriter* is that it will run in a minimum configuration Apple without costly add-ons. A 48K Apple and one disk drive are all you need. *AppleWriter* supports plug-in RAM cards and many popular 80-column cards.

AppleWriter provides many of the standard features we have come to expect from powerful word processors: Full-cursor movement—by character, word, and block—is present. Character insertion by type-ahead or type-over is user-selectable. Search-and-Replace is available for one or all occurrences, for specified text, or wildcards.

Perhaps the most unique feature is Apple's own Word Processing Language, WPL. WPL is useful for creating form letters and documents, print spoolers, and special programs for use with *AppleWriter*. With WPL you can create a file that will count words, insert text, and link files for continuous printing. WPL can also aid in the creation of Applesoft EXEC files.

SOFTWARE PROFILE SILVER

Name: Apple Writer IIe
Type: Word processor
System: 64K Apple IIe, 80-column card optional
Format: Disk
Language: Machine language
Summary: One of the best word processor packages available for the Apple.
Price: $195
Manufacturer:
Apple Computer, Inc.
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The current version, *AppleWriter IIe*, takes full advantage of the special features of the Apple IIe. The SHIFT, DELETE, TAB, and Open/Closed Apple keys are all used.

For students, small businesses, and writers, *AppleWriter* is a wise choice.

Screen Writer II

ScreenWriter has remained among the best-selling Apple word processors for the last three years, and for good reason. It offers all the complex functions of expensive systems, and yet is easy-to-use, and inexpensive.

Another plus for the package is it offers lowercase and a 70-column display in software. For those without hardware expansion boards, this is a real plus.

ScreenWriter is a professional system, capable of handling large text files with relative ease. At the same time, it can operate on single disk systems (though dual drives are much preferable). The program will also run in 48K, but a 64K machine will allow editing and print modules to exist side by side in memory.

Along with all standard functions, *ScreenWriter* can create tables of contents and indexes based on entries flagged from the text itself. It can also do justified footnotes at the bottom of the page. These are features not too often found on other word processors.

In addition, *ScreenWriter* allows you to recover deleted material, save and load parts of a document, spool a printout for simultaneous editing and printing, and attach a joystick to simulate "mouse controlled" cursor movement.

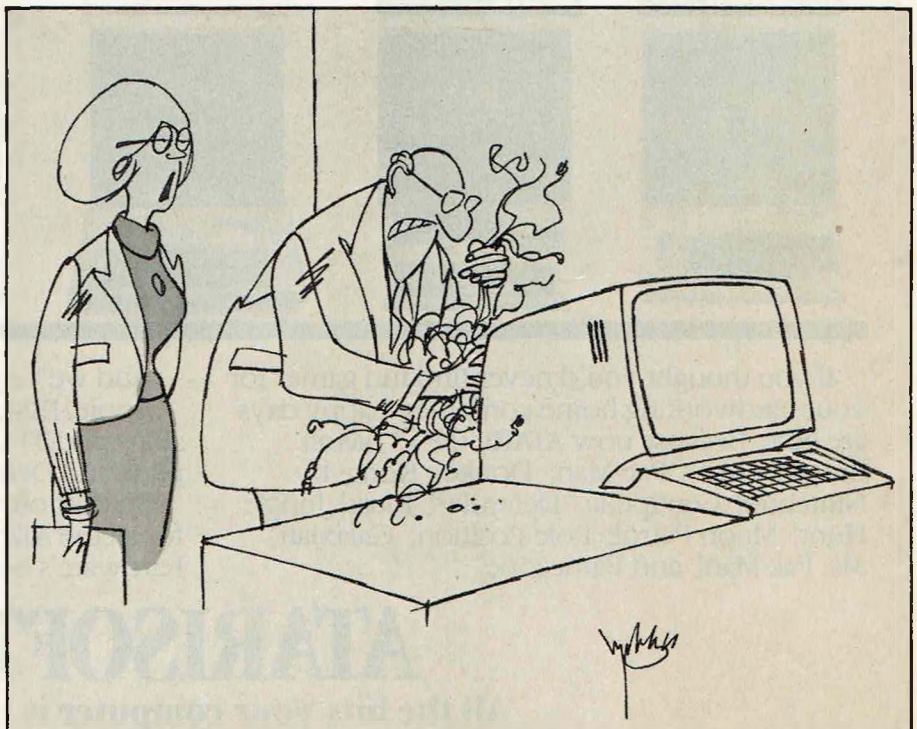
ScreenWriter has only one flaw: it is slow. Long files may take up to 10 minutes to save and backup. In the 70-column mode, text display may fall well behind keyboard entry. In machines without a type-ahead buffer, characters may occasionally be dropped.

But those problems make *ScreenWriter* no less deserving of a medal in the word processing event. It is now available in a special Apple IIe version, and for a limited time with a free spelling-checker, dubbed the *Dictionary*. For $100, this is an unbeatable value. EOD

SOFTWARE PROFILE

BRONZE

Name: Screenwriter II
Type: Word processor
System: Apple II 48K
Format: Disk
Language: Machine
Summary: More features for the price than anybody else, but slow.
Price: $130
Manufacturer:
Sierra On-Line
Sierra On-Line Building
Coarsegold, CA 93614



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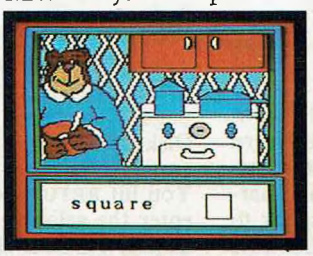

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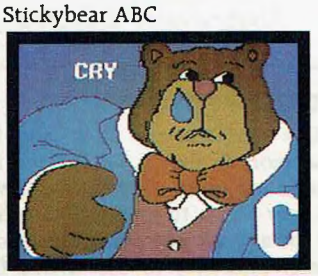

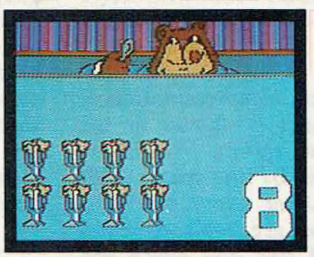

Stickybear Numbers

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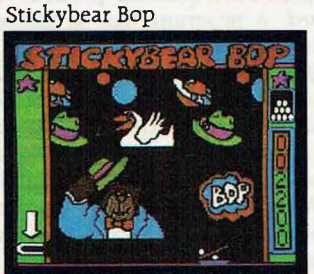
Stickybear Bop



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A-M33-B22

CIRCLE 109 ON READER SERVICE CARD

Award Winners

Word Processors For The Home

Stephen Arrants

HomeWord

The unfortunate fact about word processors is that it takes time to learn how to use them—more time than a casual user wants to invest. There is a market for a word processor that is quick to master and easy to use. Sierra On-Line produces *Screen Writer II,* one of the most popular word processors for the Apple. Their newest product is *Home Word,* a program that is easier to use than a game.

HomeWord uses icons—pictorial representations—instead of control codes for most commands. It is specifically designed for a casual user—someone who just wants to write letters, simple papers, and memos.

After you boot the program, the screen is divided into three areas—the text page, the icon area, and an area representing what a completed page will look like. There are six main icons: Print, a printer; Edit, a page; File, a file cabinet; Format, a ragged page with an arrow leading to a neatly organized page; Customize, a question mark; and Disk Utilities, a floppy disk. A joystick or cursor keys move a frame over an icon. You hit RETURN or a joystick button to enter the selected mode. A second icon display replaces the first. At each command level, there are more icons.

Editing

As text is entered, a representation of the finished product is shown in the lower right of the screen. Words are small dots separated by tiny spaces. This area is updated after every few keystrokes. The icons are replaced by a graphic display of free disk space and free memory.

HomeWord has many features found on more expensive and more complicated word processors. Global and local search and replace, underlining, boldface text, and print spooling and formatting are all here. Text can be taken from one file and inserted wherever you decide. A rudimentary outline generator is included for marking off specific areas of text with "bullets." The text can be previewed on screen before printing, giving you an idea of what the final copy will look like.

Documentation

I saw only the preliminary documentation, but that was fine, because *HomeWord* doesn't *need* documentation. Keep it as a reference, and learn *HomeWord* by using it. An instruction cassette is included. To use it, connect your cassette player to the Apple cassette I/O. The cassette player can be turned on and off with the joystick or cursor keys.

I like *HomeWord*. I use it instead of *AppleWriter* if I want to write a letter to friends or a memo. *HomeWord* will have enormous success in banishing fear of computers. It is almost too easy to use!

Of course *HomeWord* will never replace *AppleWriter* or *Screen Writer II.* It isn't intended to do that. We all know people who don't use a computer because they think it is too complicated. *HomeWord* will change that. The students in a third grade class had no problems using this software. Within an hour, they were writing short essays and letters without having any instructions or documentation on *HomeWord.* I think that is the real test of user-friendly software.

SOFTWARE PROFILE GOLD

Name: HomeWord
Type: Word processor
System: Apple, C-64, Atari
Format: Disk
Language: Machine
Summary: Almost too easy to use.
Price: $69.95
Manufacturer:
Sierra On-Line
Sierra On-Line Building
Coarsegold, CA 93614
(209) 683-6858

Bank Street Writer

Bank Street Writer was the first of what was soon to become an overflowing category of word processor: a low-cost, extremely easy-to-use system, designed so that even a child could use it.

Though it was the very first, *Bank Street Writer* remains among the best. Developed in conjunction with a research and design team from the Bank Street College of Education, *Bank Street Writer* was designed to embody the word *simplicity*, and it does so quite admirably.

And although it has been designed for ease of use by children, *Bank Street Writer* is quite capable of producing professional results with any short document. Up to about 2300 words can be stored in any single text file. Of course, files can be linked, so that larger documents can be stored.

The top of the *Bank Street Writer* screen always displays the choices which are avail-

able to the user. Among these are options to delete or undelete, move blocks of text, find and replace character strings, save, kill, rename, and print files. All of these modes can be selected straightforwardly by moving the highlighted bar to the desired choice, then pressing RETURN. It is that simple, and becomes second nature very quickly.

We cannot imagine any features to demand of a $70 word processor that are missing from this package. Working with *Bank Street Writer* is a pleasure, and if that pleasure rubs off on your kids, they will undoubtedly do better in school. We remember two-finger typing the wrong letter in our first tries at a typewriter—then feverishly straining to alter the sentence to fit the typo. Childish indeed, but too much of today's world runs in just that way—bending the intention to match the error. It is a priceless lesson to teach your children otherwise, and *Bank Street Writer* presents an invaluable tool with which to do so.

SOFTWARE PROFILE — SILVER

Name: Bank Street Writer

Type: Word processor

System: 48K Apple II, Atari, C-64 IBM PC, PCjr

Format: Disk

Language: Machine

Summary: A must if you have a micro and kids.

Price: $69.95; PCjr, $79.95

Manufacturer:
Broderbund Software
17 Paul Dr.
San Rafael, CA 94093
(415) 479-1170

Cut and Paste

Electronic Arts, wizards of computer gaming, have entered the personal productivity software arena. With the release of *Cut and Paste*, they have proven that they can write "serious" software.

Cut and Paste is one of the simplest word processors available. It works like a typewriter. Each key on the Apple does what it says. TAB works as a tab, DELETE deletes, and SHIFT works without any hardware modifications.

SOFTWARE PROFILE — BRONZE

Name: Cut & Paste

Type: Word Processor

System: 64K Apple IIe, C-64, Atari, IBM PC, PCjr

Format: Disk

Language: Assembly

Summary: One of the best! Effortless and easy.

Price: $49.95

Manufacturer:
Electronic Arts
27575 Campus Dr.
San Mateo, CA 9403
(415) 571-7171

The ESC key is the heart of command generation. ESC followed by a cursor key selects commands. When editing text, ESC and a cursor key selects the type of editing you wish to perform.

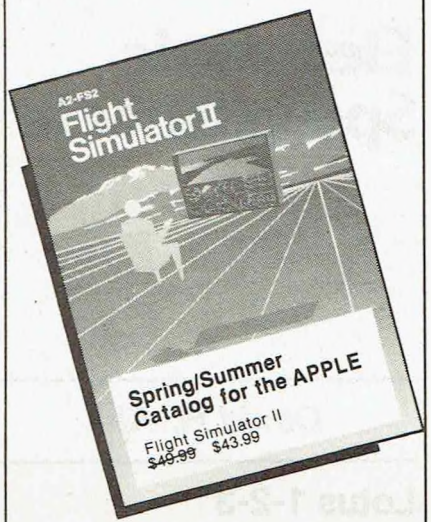
Control keys are also used, and for the most part, are mnemonic. CTRL-C "cuts" text into a buffer, CTRL-P "pastes" the text into place. CTRL-S moves the cursor to the start of the text, while CTRL-E moves it to the end. Text insertion is type-over, rather than push-ahead.

All of these commands are also available via a menu at the bottom of the screen. You don't have to use a control sequence if you don't want to.

Printing is the most complex area of word processor use. You can often spend more time configuring a printer than you did learning how to edit. *Cut and Paste* uses a simple method for determining printing needs. Since people measure pages in inches, and not in characters-per-inch, so does *Cut and Paste*.

The *Cut and Paste* print function is intelligent enough to remove windows (single lines which belong to a paragraph on another page). Not even a full-featured word processor such as *AppleWriter* can do that!

Cut and Paste is a word processor for people who need to write short letters, memos, and school papers. If you use a typewriter for these jobs, *Cut and Paste* is powerful enough for you. Using this word processor is almost as much fun as playing one of Electronic Arts' games. END



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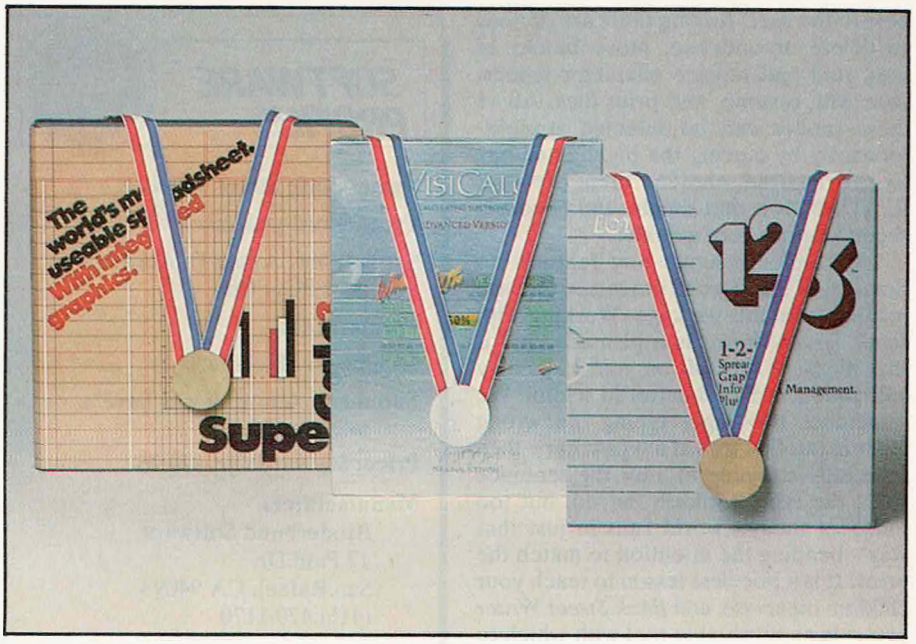

David H. Ahl

Lotus 1-2-3

While *Lotus 1-2-3* is actually an integrated package consisting of both spreadsheet and graphics software, we prefer to think of it as an enhanced spreadsheet.

As a spreadsheet, it permits up to 2048 rows and 256 columns with the maximum number of cells limited only by the memory of the computer. Layout and labeling is excellent with individually variable width columns, label centering, automatic dollar signs, and negative numbers designated by either — or parentheses.

It has a wide choice of built-in functions including those for calculating net current value, rate of return, average, percentage, log, max and min, as well as many other financial, statistical, trigonometric, and arithmetic functions.

1-2-3 is able to replicate rows, columns, or blocks; it can also insert and sort rows and columns, features found in few other spreadsheets.

But perhaps the major advantage of *1-2-3* is its ability to automatically produce bar, line, pie, and x-y charts and print them on either a printer or plotter.

There is no doubt that *1-2-3* deserves its position as the top selling software package of 1983.

SOFTWARE PROFILE — GOLD

Name: Lotus 1-2-3
Type: Spreadsheet
System: 192K IBM PC
Format: Disk
Summary: The premier spreadsheet.
Price: $495
Manufacturer:
Lotus Development Corp.
55 Wheeler Dr.
Cambridge, MA 02138
(617) 494-1192

VisiCalc: Advanced Version

Original *VisiCalc* for the Apple was an instant hit when it was released in 1979, and it spawned more than 30 imitators in the ensuing four years. Now, VisiCorp has designed an updated version for the Apple IIe, *VisiCalc Advanced Version.*

This version has the features of most of its competitors, and then some. The width of columns can be individually varied; tabs set within a cell; text aligned to the left, right, or center; commas displayed in long numbers; numbers preceded by + or -; trailing zeros suppressed; and much more.

Advanced VisiCalc has table lookup and a full range of conditional (logic), financial, arithmetic, trig, and log functions. In the financial area, it can calculate rate of return, future value, interest or discount rate, and current value.

It is one of the few spreadsheets that can number pages and put a title on each page. It can also activate special printer features.

The documentation is excellent, and it has a useful on-screen "help" facility, quick reference guide, and command chart.

The main limitation is in the hardware requirements: an Apple IIe with 128K and 80-column card.

SOFTWARE PROFILE — SILVER

Name: Advanced VisiCalc
Type: Spreadsheet
System: 128K Apple IIe
Format: Disk
Summary: Best Apple spreadsheet around.
Price: $400
Manufacturer:
VisiCorp
2895 Zanker Rd.
San Jose, CA 95134
(408) 946-9000

SuperCalc³

Sorcim's *SuperCalc*³ is the successor to the popular *SuperCalc* and *SuperCalc*².

Although the program is still limited to 63 columns and 254 rows, Sorcim has added many extended features to *SuperCalc*³. Column widths are individually variable, and both data and text can be aligned to the right or left in cells, negative numbers designated by — or parentheses, dollar signs inserted, and trailing zeros suppressed.

*SuperCalc*³ includes all the expected arithmetic functions including net present value, log, round, max and min, exponents, as well as regular and inverse trig functions. It has several conditional (logic) functions, table lookup, and the ability to use the current date in the worksheet. Weak spots are the lack of financial and statistical functions.

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SPREADSHEETS

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An excellent help facility is built into *SuperCalc*³ that is specific and relates to what is being done. In addition, 12 tutorial lessons are supplied on disk. END

SOFTWARE PROFILE

BRONZE

Name: SuperCalc³

Type: Spreadsheet

System: 96K IBM PC

Format: Disk

Summary: Versatile and easy to use.

Price: $395

Manufacturer:
Sorcim
2310 Lundy Ln.
San Jose, CA 95131
(408) 942-1727

THE SENSIBLE SPELLER™ IV CORRECTS SPELLING MISTAKES *IMMEDIATELY.*

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*April 1983, Softalk magazine reader survey.

**Not all features are available with CP/M, PFS: WRITE and Word Handler.

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CIRCLE 111 ON READER SERVICE CARD

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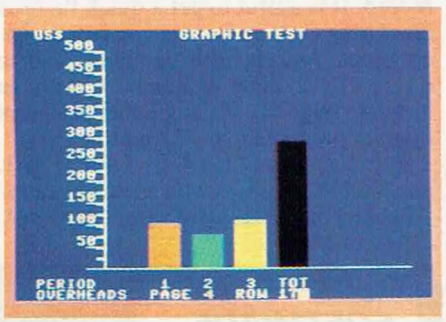

Calc Result Easy $49.95

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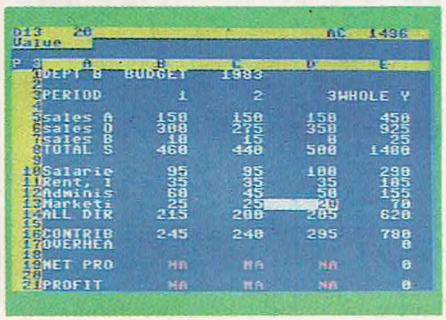

Calc Result Advanced $99.95

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Diary $29.95

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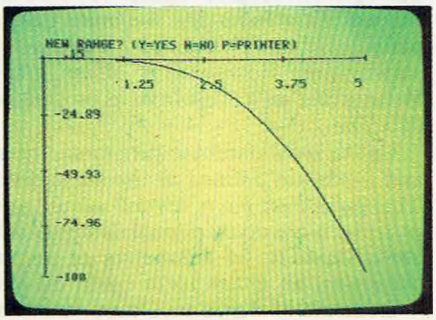

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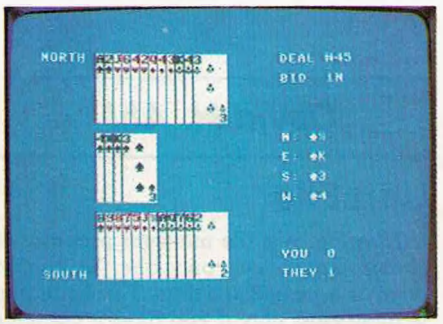

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CIRCLE 112 ON READER SERVICE CARD

Award Winners

Database Management Systems

David H. Ahl

UltraFile

UltraFile is a file manager program of classic design, i.e., only one file can be open or accessed at a time. This limitation is significant only if you have a complex inventory, accounting, or business system which requires the integration and simultaneous updating of several files. For most applications, *UltraFile* is more than adequate.

UltraFile is divided into four modules: Design, Update, Report, and Graphs; in the floppy disk version, one disk is allocated to each of these functions. The program is huge and takes nearly one megabyte of disk space. Despite this, disk swapping is a minor inconvenience and each disk can be booted independently. Of course, the entire program can be stored on a Winchester drive and that is the recommended way to go.

UltraFile uses a wide variety of menus and sub-menus to guide you through an impressive array of tasks including file design, data entry, data search (browse and question), report generation, graphics, indexing, and sorting.

This is one of the few database packages with graphics; it can produce bar charts (two- or three-dimensional), area graphs, and line graphs.

The documentation includes both an excellent tutorial section and a reference section.

UltraFile works well and is easy to use; the built-in graphics are an added attraction. If you are in the market for a general purpose file manager that is versatile, capable, and relative foolproof, you would be hard pressed to beat *UltraFile*.

SOFTWARE PROFILE GOLD

Name: UltraFile
Type: Database (File Management)
System: IBM PC/XT
Format: Disk
Summary: Highly flexible and powerful menu-driven program. Has an abundance of special features, including a built-in graphics function.
Price: $195
Manufacturer:
Continental Software
11223 South Hindry Ave.
Los Angeles, CA 90045
(213) 410-3977

Fast Facts

Fast Facts is a screen-oriented file management program similar to *PFS:File*. Indeed, *Fast Facts* has a similar design philosophy to *PFS:File* and, thus, many similarities. However, it offers many features that set it apart from its progenitor, *PFS:File*.

Unlike most database programs, forms and fields are defined at the same time. This gives *Fast Facts* several advantages over the more conventional design which limits fields to 64 characters or so. In particular, an entire form could be one long text field if you so desire. You can also search on any word or phrase, regardless of the number of forms in a record.

Form design (and redesign, if necessary) is very easy, although the "data read" portion of the redesign process is very slow. Data entry is straightforward and data search is also easy and fast.

Fast Facts can produce three reports: Quick Print prints only the first 12 characters from the first five fields of each record. It is useful to get a quick fix on a file. Using Custom Report you can design columnar reports with computed fields, e.g., add a column of numbers. And, as its name suggests, Mailing Label produces them in practically any format.

Fast Facts uses the DIF format, so it can interchange data with *VisiCalc*, *Lotus 1-2-3*, and other programs using this format.

SOFTWARE PROFILE SILVER

Name: Fast Facts
Type: Database (File Management)
System: IBM PC/XT
Format: Disk
Summary: General purpose database program that is ideal for those who treasure flexibility and simplicity above all else. Limited to 1500 records per file.
Price: $195
Manufacturer:
Innovative Software
9300 W. 110th St., Suite 380
Overland Park, KS 66210
(913) 383-1089

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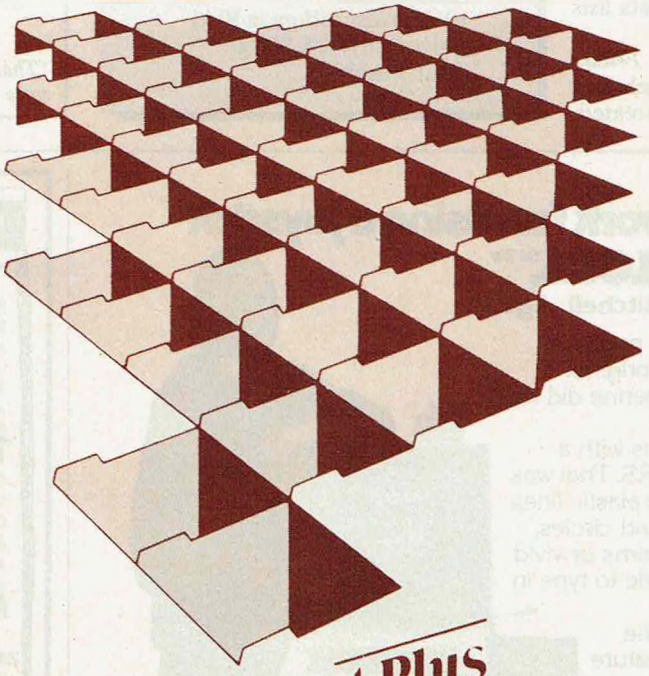

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TRADEMARKS:
Advanced DB Master and DB Master (DB Master Associates) • Apple II+ and IIe (Apple Computer, Inc.) • DIF (Software Arts Corp.) • Franklin ACE (Franklin Computer Corporation) • 1-2-3 (Lotus Development Corporation) • Multiplan (Microsoft Corporation) • VisiFile (VisiCorp)

CIRCLE 113 ON READER SERVICE CARD

It can also produce ASCII text files for use by word processing or communications programs.

Fast Facts is limited to 1500 records, so it does not have the capacity to handle large files. Nevertheless, it should please someone looking for a text-oriented database that is flexible and easy to use.

Friday!

Probably the most popular relational database management system is *dBase II* by Ashton-Tate. As a sophisticated system, it is beyond compare. However, it is probably beyond the needs and pocketbooks of many users. For this reason, Ashton-Tate released *Friday* as a simpler spin-off of its illustrious forebear.

Friday is a menu-driven file management program that allows only one file to be open or accessed at a time. All program operations are controlled through a series of menus and sub-menus. This type of program is ideal for users who want to custom design a wide variety of data lists with a minimum of effort.

Unlike *Fast Facts* or *PFS:File*, *Friday* requires that fields be specified, including data type. After a file has been created, *Friday* will set up a standard screen layout which may then be customized.

Data entry is fast and straightforward. Data search can be done by scanning individual records or in groups that meet user-defined search criteria. Data items can be changed during this process.

Friday can produce three reports: quick (columnar) reports, custom reports, and mailing labels. Custom reports can be as elaborate as you wish. As might be expected, *Friday* interfaces directly and easily with *dBase II*.

Our main criticism of *Friday* is that it is slow, both in data searching and preparing custom reports. Also, the limitation of 32 characters per field is restrictive. Nevertheless, it is well-designed, exceptionally versatile, and much easier to use than its big brother. END

SOFTWARE PROFILE

BRONZE

Name: Friday!

Type: Database

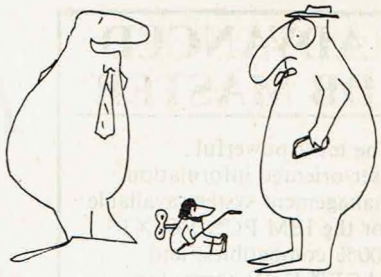
System: IBM PC/XT, CP/M, TI Professional Computer, and others

Format: Disk

Summary: Extremely versatile and well-designed database program, but data search and printing activities are very slow.

Price: $295

Manufacturer:
Ashton-Tate
10150 West Jefferson Blvd.
Culver City, CA 90230
(213) 204-5570



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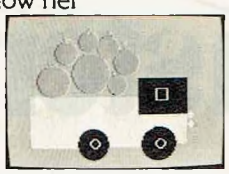

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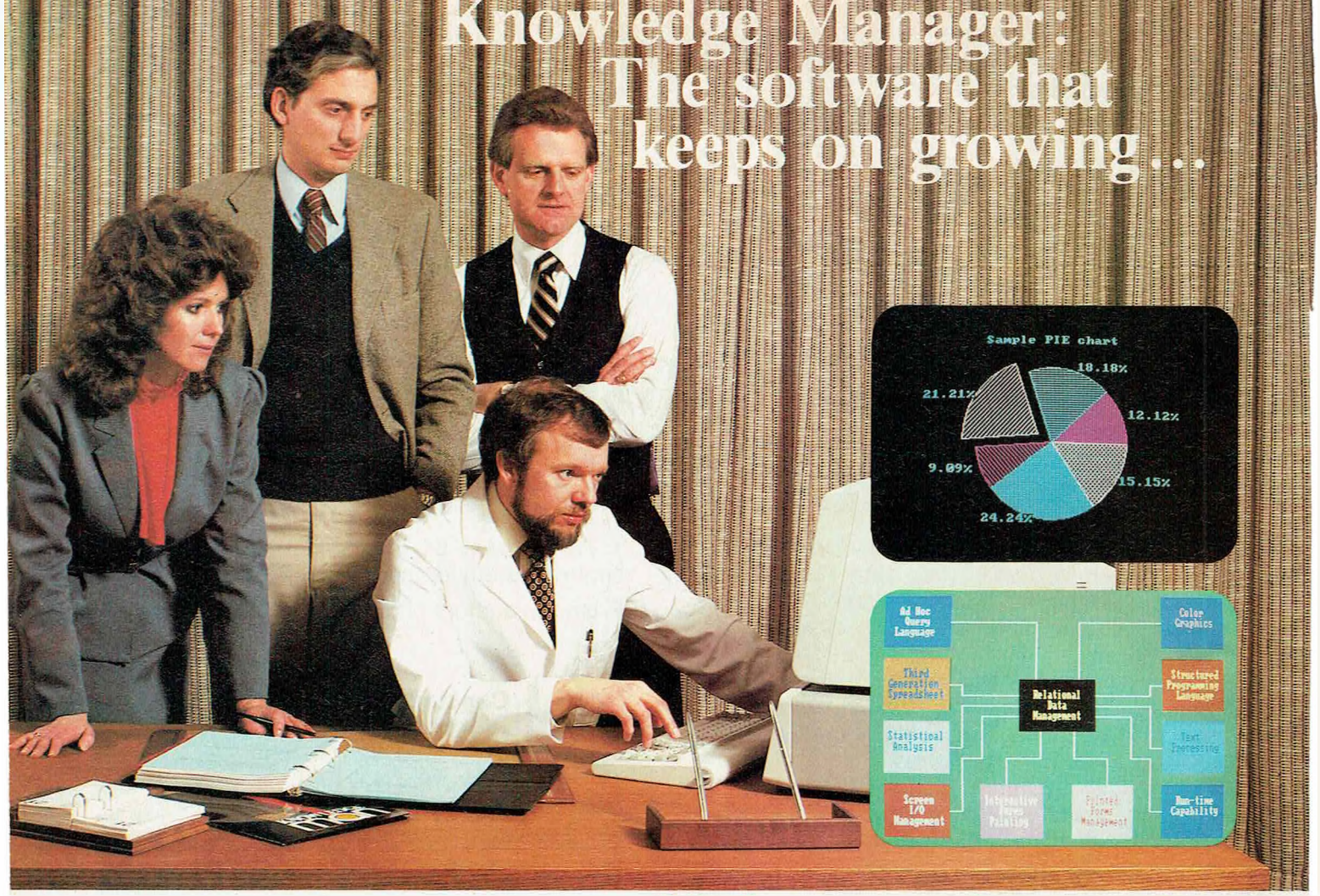

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Dynamic sorting and grouping of query output	Control of output format	Data can be customized to users needs
Spreadsheet cells may be defined in terms of • formulas • data table values • programs	Cell can automatically retrieve information from tables and can perform intricate mathematical operations on that information	No need to rekey information or perform calculations separately
Forms creation for screen and printer using 8 colors, blinking, bell, prompts, reverse video, etc.	Greater versatility in screen and printed output	Screens and forms are easy to understand and use
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*Partial List

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Award Winners

Pre-School Education

Betsy Staples

Stickybear Opposites

Stickybear Opposites is our favorite in the excellent Stickybear series from Weekly Reader. It comes with a hardcover book, poster, stickers, and Parent's Guide, but the graphics are what makes this program absolutely irresistible.

The Guide encourages you to let your child learn to use the program by experimenting with the keyboard or paddle, and our children had no trouble with this.

In *Opposites,* the child uses the arrow keys or paddle to switch between detailed hi-res pictures illustrating words opposite in meaning. For example, in the illustration of *up,* we see Stickybear climbing a flight of stairs. When we switch to the opposite picture, we see him descending the same stairs. In another picture we see Sticky's *back* followed by an about face which shows his smiling *front.* In each case the word being illustrated appears on the screen along with the graphics.

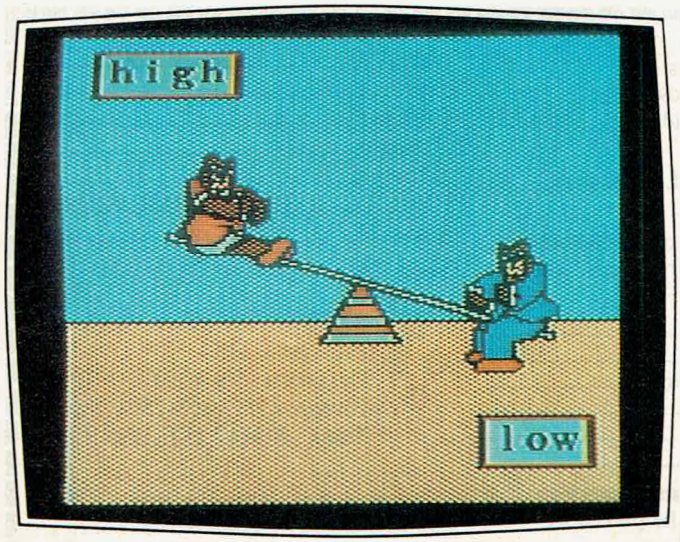
Flipping between the two pictures in each pair occurs instantaneously, and there is only a short delay when moving from one pair to the next. The child can flip back and forth as many times as he wants in a given pair, and there are enough pairs of words to keep him playing for quite a while.

The word being illustrated appears on the screen along with the graphics.

The Parent's Guide says that *Opposites* encourages computer awareness and exploration and discovery while teaching the concept of opposites. It certainly seems to do all those things well and in an entertaining way.

The Guide also includes suggestions for using the program with your child and lists additional activities to reinforce the concepts introduced.

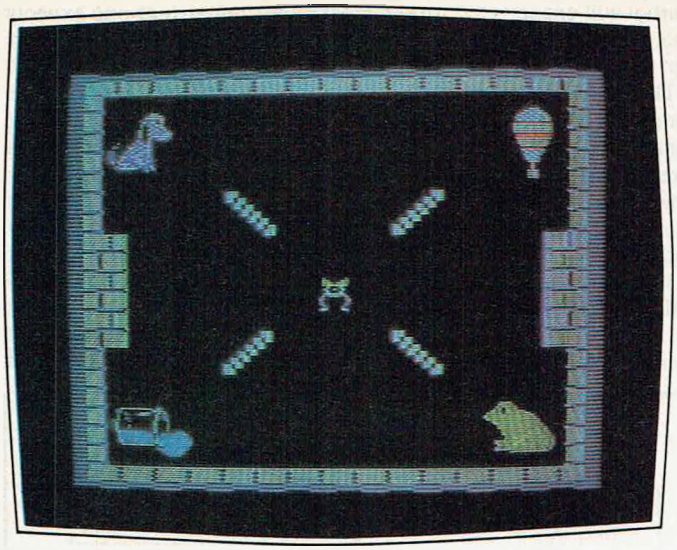
As we said at the beginning, this is our favorite Stickybear program. Children who could read enjoyed seeing the illustrations of words they knew; children who were learning to read enjoyed guessing the words after seeing the illustration; and children who could not



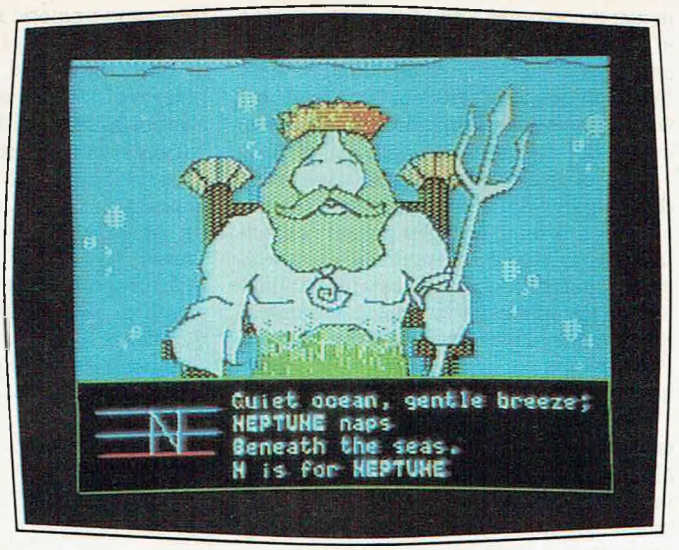
Stickybear Opposites

SOFTWARE PROFILE GOLD

Name: Stickybear Opposites
Type: Early learning game
Authors: Richard Hefter, Janie and Steve Worthington
System: Apple
Format: Disk
Summary: First class educational entertainment.
Price: $39.95
Manufacturer:
Weekly Reader Family Software
245 Long Hill Rd.
Middletown, CT 06457
(800) 852-5000
(203) 347-7251



Learning With Leeper Menu



Alphabet Beasts and Co.

read had fun just learning the concepts and recognizing the pictures. We recommend *Stickybear Opposites* without reservation.

Learning With Leeper

One of the most attractive features of *Learning With Leeper* is that a young child can play with it for hours with no adult intervention whatsoever. The program begins will a full screen pictorial menu from which the child, using a joystick, chooses which of four games he wants to play.

Dog Count requires the child to select a group of bones for a group of dogs by counting the number in each group. The number of times he makes the correct choice is tallied by a collection of smiley faces on the screen.

Balloon Pop is a shape matching game the object of which is to pick the one of four shapes or letters at the bottom of the screen that matches the shape or letter displayed at the side of the screen. In Leap Frog, the third game on the disk, the child must guide a cute little frog through a maze. His reward is a short animated cartoon.

The fourth game in the package is Screen Painting, which is not really a game at all but, as the name implies, an artistic exercise. The child uses the joystick to draw on the screen with red, green, blue, or purple "paint."

The games are attractive to children, hold their interest, and teach some useful skills.

Learning With Leeper is an excellent package. The games are attractive to children, hold their interest, and teach some useful skills.

SOFTWARE PROFILE — SILVER

Name: Learning With Leeper

Type: Educational game

System: 48K Apple, 16K Atari,C-64, ColecoVision; joystick

Format: Disk/cartridge

Summary: Excellent learning game for pre-schoolers.

Price: $39.95 cartridge; $29.95 disk

Manufacturer:
Sierra On-Line, Inc.
Sierra On-Line Building
Coarsegold, CA 93614

Alphabet Beasts and Co.

Alphabet Beasts and Co. is not just an alphabet primer; it is an exotic collection of elves, mythical beasts, and characters from legend portrayed in some of the very finest hi-res color graphics ever concocted for an educational software package.

The disk is easy to use. After the initial boot, you simply select a letter, hoist your three-year-old onto your lap, and watch the colorful alphabet show unfold. Each time a letter is pressed, a little presentation appears on screen. First, there appears a hi-res illustration, then a little verse in which the subject letter appears. Here is a sample verse:

My new ROBOT, her name's Rose
I taught her all
The games she knows!
R is for ROBOT.

This verse is, of course, meant to be read aloud to the child. For a beginning reader it is a good medium for practice in phonics—sounding out the words. Several of the verses repeat the sound of the letter over and over, giving you the opportunity to emphasize the phonic value of the letter.

In connection with the opportunities for phonics practice, the program offers an ingenious animation of block printing for each letter in the text area under the individual illustrations. Three ruled lines are displayed to the bottom left of the screen, simulating ruled composition paper. Each letter chosen is drawn on that space,

SOFTWARE PROFILE — BRONZE

Name: Alphabet Beasts & Co.

Type: Alphabet, numbers primer

System: 48K Apple II, C-64

Format: Disk

Language: Basic and assembler

Summary: Superb graphics, inventive approach make this a great tool to teach letters and numbers.

Price: $34.95

Manufacturer:
Reader's Digest Services, Inc.
Microcomputer Software Division
Pleasantville, NY 10570
(800) 431-8800

in just the manner a child would be taught in school. The child, having seen the picture and heard the verse read aloud, enters the appropriate letter from the keyboard, which begins the letter drawing process, complete with entertaining sound effects.

One of the most delightful aspects of the program is the subject matter for the alphabet primer. A clever parent can use the subject matter of mythical monsters, elves, characters from Greek mythology, and all the other myriad magical manifestations as a departure point for many a fine session of storytelling and read-aloud.

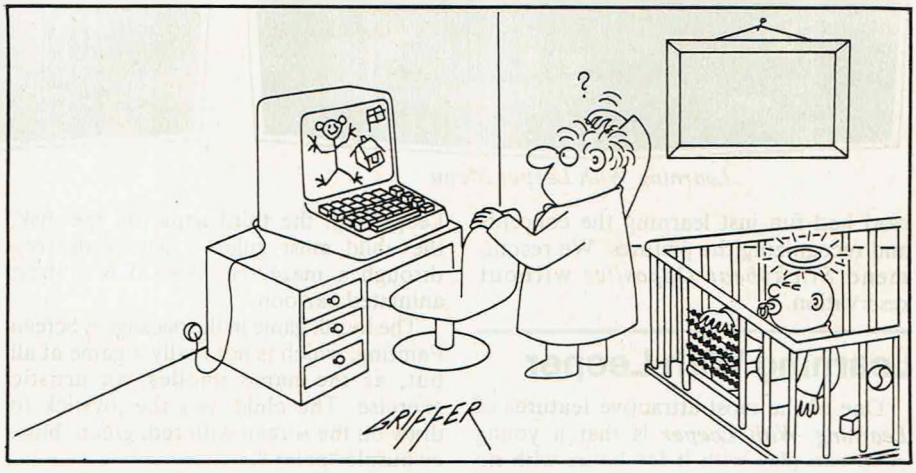
Used with imagination, this program can be not just an introduction to the alphabet, but to the entire world of reading. The pictures are so beautifully executed and the subject matter so imaginative, that a child almost has to want to know more about them. That is your cue to bring out the appropriate storybook for a read aloud, read along session.

Number Tutor

Alphabet Beasts and Co. also includes a number tutor. All you have to do to access the numbers at any time in the program is to press one of the number keys. A fascinating little sequence which depicts the number in counting, verbal form, and numeric symbol will ensue.

First, the name of the number is written in block letters in an animation at the bottom of the screen. The Arabic number symbol is then written alongside the verbal expression. Then, in the graphics screen above, an animated fire-breathing dragon appears to create a picture of a dragon (or dragons) bent into the shape of the number symbol. Finally, one at a time, little dragons appear to the right of the graphics screen until the appropriate number is reached.

Alphabet Beasts and Co. embodies all of the most important virtues one expects in educational software for the home. It has great graphics. It is well thought out. It is entertaining for children and for their parents. It stimulates the imagination. It is rich in subject matter, and it is easy to use. It also costs much less than many educational programs we have seen which attempt to teach the same material but which do not offer the same high level of beauty in graphics or imagination in overall design. *Alphabet Beasts* should find an honored place in the software libraries of many a home and school. END



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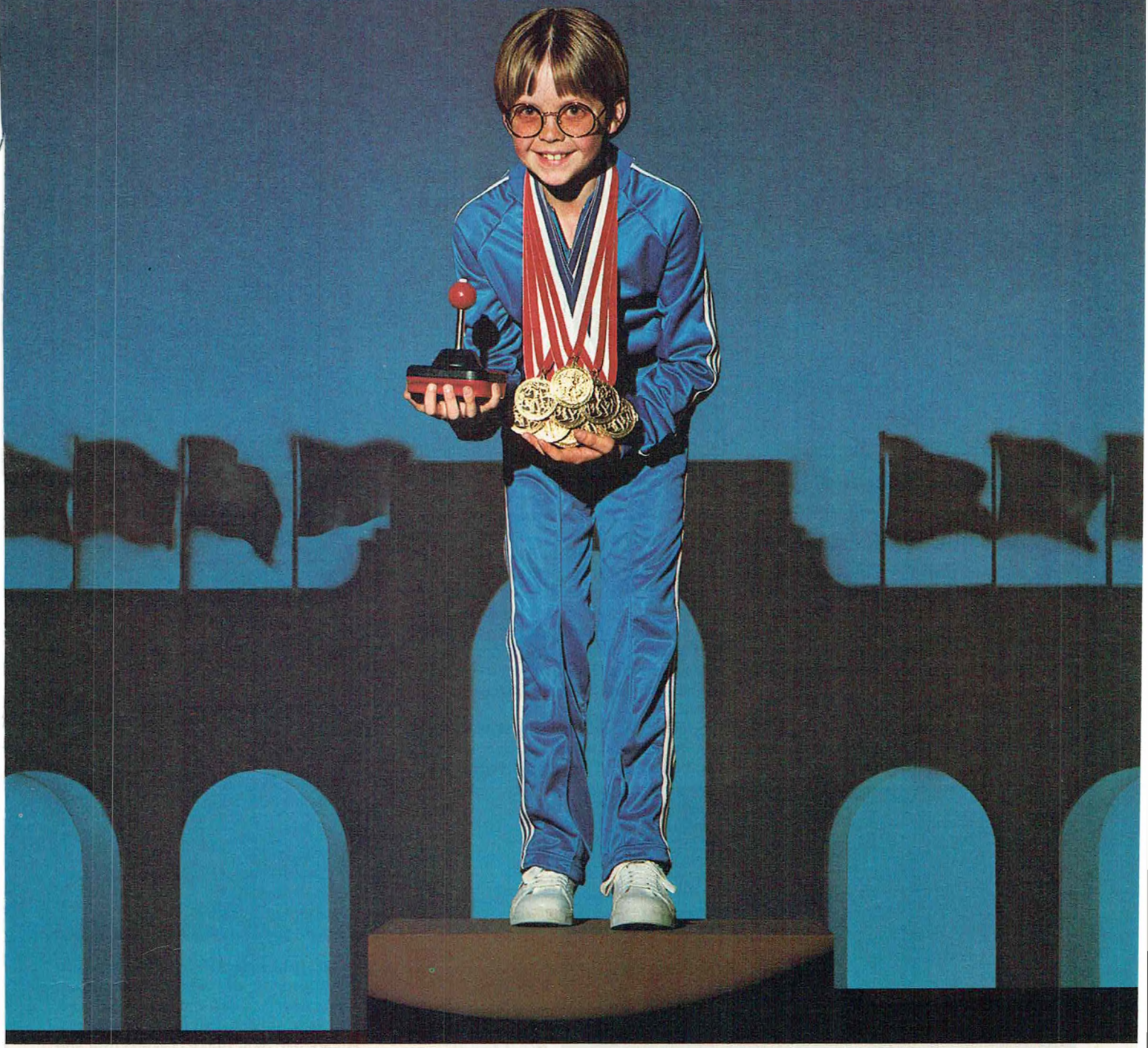
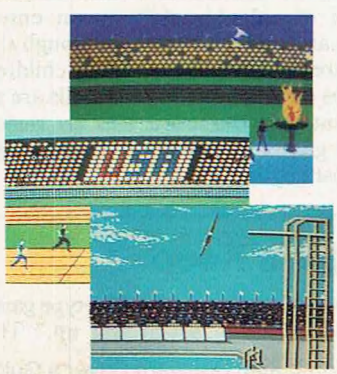
CIRCLE 118 ON READER SERVICE CARD

SUMMER GAMES.
WHY WATCH THE OLYMPICS WHEN YOU CAN BE IN THEM?





You're an Olympic athlete competing in eight key events at the Summer Games. How well can you score in track, swimming, diving, shooting, gymnastics and more? So realistic, there's even an opening ceremony and awards presentation after each event.

Unlike other "Olympics-Like" games, Summer Games has incredible realism, superb state-of-the-art graphics and sound effects (including national anthems from 18 countries), and it is a true action-strategy game. In each event you must plan and execute your game strategy in order to maximize your score. It is not just a matter of how fast you can move the joystick.

So change into your running shoes, grab your joystick and GO FOR THE GOLD!

One or more players; joystick controlled.

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CIRCLE 149 ON READER SERVICE CARD

Award Winners

Elementary Education

Betsy Staples

Arcademic Skill Builders

Readers of *Creative Computing* know that we endorse wholeheartedly all attempts to teach good old fashioned grammar to learners of all ages. We are also in favor of finding entertaining ways to introduce and reinforce the rules of grammar and syntax.

Arcademic Skill Builders from DLM earns our gold medal by doing all of the above with flair, cleverness, and good sense. The language arts series includes six packages, each of which provides entertaining drill and practice on a specific concept.

Verb Viper features a dragon who selects the verb that agrees with a specified noun by flicking his tongue. Both regular and irregular English verbs are drilled.

In *Word Master*, you race against time to identify homonyms, antonyms, and synonyms, and in *Word Radar*, you simply find identical word pairs. *Word Man* is a maze game that requires you to recognize which combinations of letters are real words.

Spelling Wiz drills spelling skills by asking you to choose which of five letters or combinations of letters correctly fills in the blank in an object word. *Word Invasion*, our favorite in the series, features an octopus who helps you match words with the parts of speech that describe them.

Arcademic Skill Builders offers drill and practice of valuable skills in an entertaining, arcade-like format. Although the games are intended to be used by children in grades one through six, the skills are so important and the word lists so varied that the games can be used to advantage by almost anyone.

SOFTWARE PROFILE

GOLD

Name: Verb Viper
Word Master
Word Radar
Word Man
Spelling Wiz
Word Invasion

Type: Educational games

System: 48K Apple, IBM PC, C-64

Format: Disk

Summary: Entertaining practice of worthwhile skills.

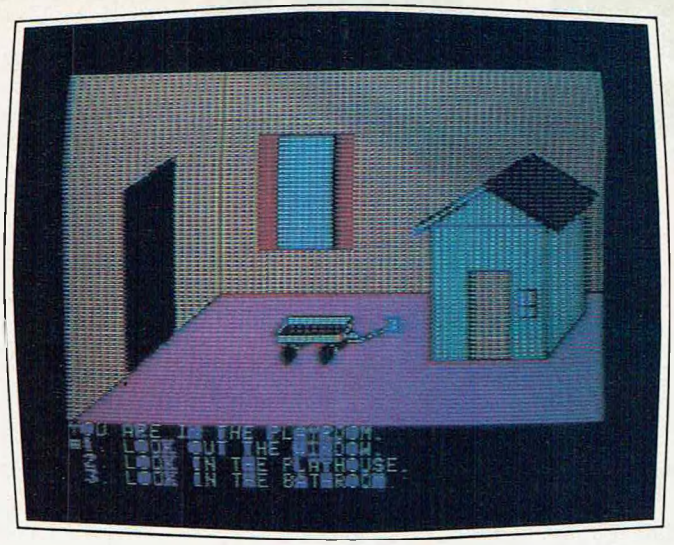
Price: $44

Manufacturer:
Developmental Learning Materials
P.O. Box 4000
Allen, TX 75002

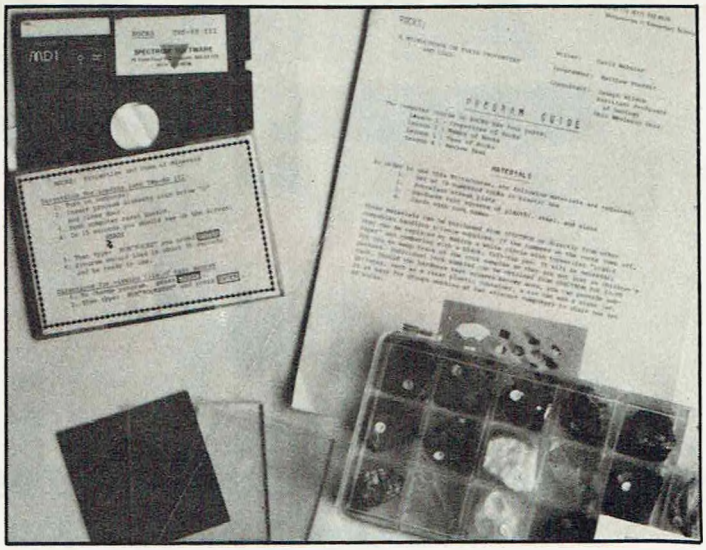
Word Invasion

Dragon's Keep

Dragon's Keep is an adventure-type game for children aged "seven and up." The



Dragon's Keep



Rocks package comes with disk, Teacher's Guide, box with 18 rock samples, streak plate, hardness squares, and rock labels.

Parent Guide tells us that it is "designed to help your child develop skills in reading comprehension and map reading."

The adventure takes place in and around a small home in suburbia. The object of the game is to free 16 animals being held captive by an unfriendly dragon.

Each scene is depicted in splendid hi-res graphics. To act, you must read the two or three sentences printed at the bottom of the screen and choose one by pressing RETURN.

The reading level of the action choices is second grade, and the game is delightfully free of arbitrary surprises—sudden death, endless mazes, lost treasures, etc. A modicum of common sense and an orderly approach to the exploration will lead to success.

Along with the disk and Parent Guide, you get a poster-size map of the house and environs, 16 animal stickers, and a compass sticker which you are advised to place "on the monitor near the screen." As you discover animals, you can place the corresponding stickers on the map.

The map is intricate enough and the hiding places of the animals clever enough to be challenging even for players in the "and up" age range.

We like *Dragon's Keep*. It uses a popular game format to develop skills rather than just drill them, and although it seems to be designed for home use, it could certainly be useful in the classroom as a cooperative venture.

SOFTWARE PROFILE — SILVER

Name: Dragon's Keep
Type: Educational adventure game
System: 48K Apple, IBM PC, PCjr
Format: Disk
Summary: Hi-res adventure with educational objectives for ages 7 and up.
Price: $29.95
Manufacturer:
Sierra On-Line, Inc.
Sierra On-Line Building
Coarsegold, CA 93614

Spectrum Science Series

In the six elementary science learning packages from Spectrum Software, the computer is used to channel the student's observation of science materials and pictures included with the packages.

Each program contains three or four lessons consisting of approximately 75 questions in total. The answers to the multiple-choice questions can be inferred by observing the accompanying material or illustrated cards.

The six courses available are:

- *Tracks.* Footprints and tracks of eight animals.
- *Rocks.* Properties, identity, and uses of 18 rocks and minerals.
- *Dinosaurs.* Structure, size, and diet of 15 dinosaurs.
- *Coins.* Designs, composition, grading, and value of coins.
- *Teeth.* Types of teeth, animal and human teeth, skull x-rays, and dental care.
- *Metrics.* Significance of metric system, measurements.

The *Rocks* program described here is typical of the series. The basic package comes with a disk or cassette tape with the lessons and an eight-page Teacher's Guide and costs $18. The *Rocks* program offers a kit of materials which includes a plastic box with 18 rocks and minerals, a porcelain streak plate, three hardness test squares, and set of rock name cards for $35.

The first lesson consists of 27 questions and covers the properties of rocks and minerals. Questions 1 through 16 can be answered simply by examining the 18 rock samples. The next three questions require the use of the streak plate. The last eight questions require the use of the hardness squares (plastic, steel, and glass) to arrive at a hardness rating.

Lesson 2 uses a clever algorithm to help you determine the name of each rock, and Lesson 3 consists of 25 questions about the uses of rocks. Finally, Lesson 4 presents 20 review questions, some of which are easy and straightforward, and others of which require you to really know your rocks.

The Teacher's Guide contains infor-

SOFTWARE PROFILE — BRONZE

Name: Rocks
Type: Educational tutorial
Author: David Webster
System: Apple, TRS-80 Model I, III
Format: Disk or tape
Language: Basic
Summary: One of six tutorial microcourses
Price: $53 (see text)
Manufacturer:
Spectrum Software
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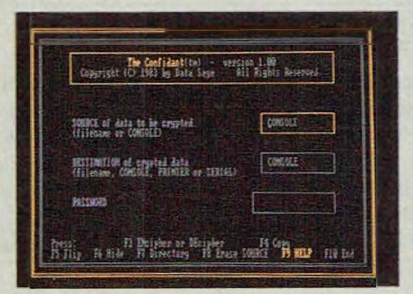

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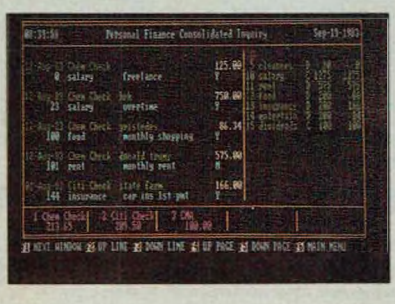

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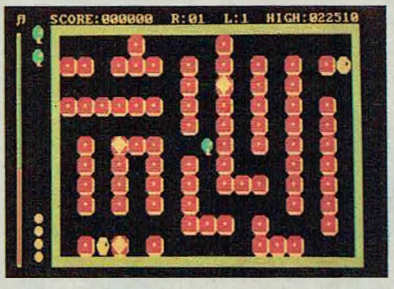

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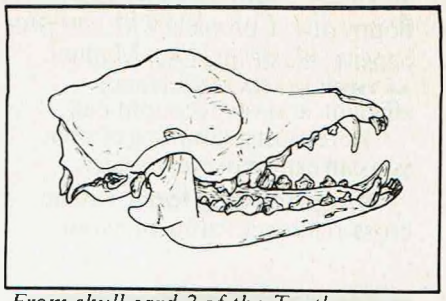


From skull card 3 of the Teeth Microcourse.

mation on the properties, identities, and uses of rocks as well as eight suggested classroom activities on rocks and minerals.

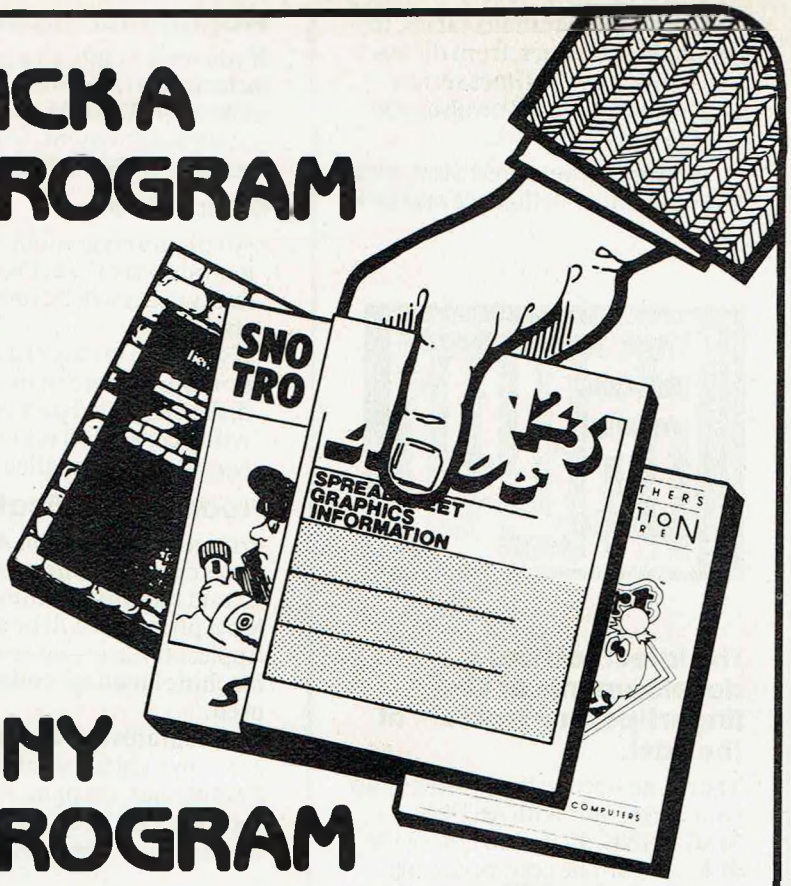
All six microcourses are available for the Apple on disk, and all but Tracks and Dinosaurs are available for the TRS-80 Model III on tape or disk. Coins is also available on tape for the Atari.

The microcourses are priced as follows:

Rocks	$18
Set of materials	35
Coins	18
(Set of 13 coins, magnifier, magnet)	26
Metrics	28
Teeth (inc. 6 cards)	38
Dinosaurs	37
Tracks (inc. 10 cards)	43

END

PICK A PROGRAM



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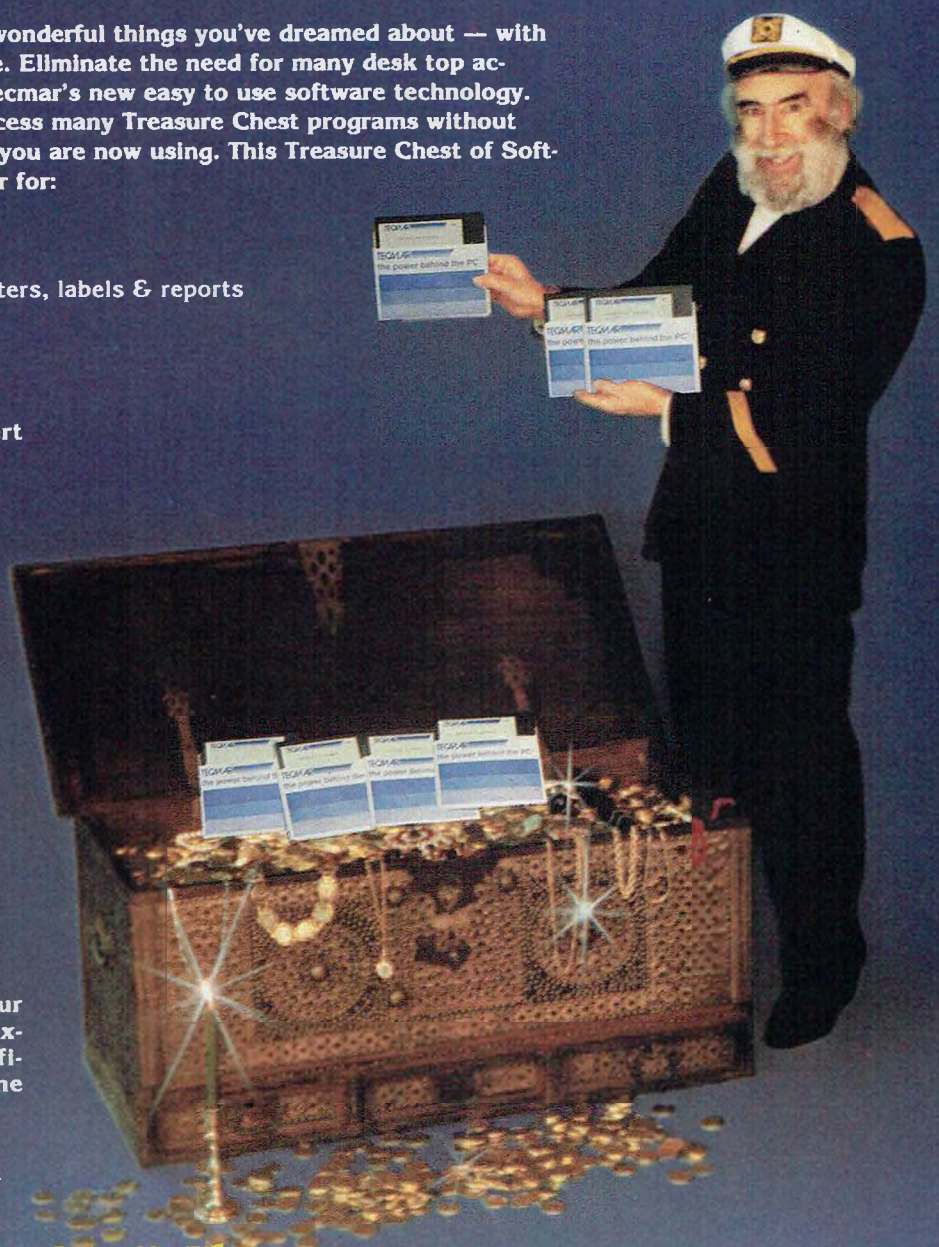

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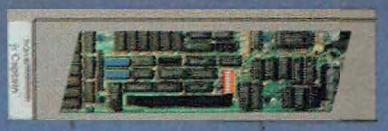

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Taking this same sales database, you might also want to define special fields for a custom Output Plan. With a defined field for "COMMISSIONS DUE," *Please* can automatically compute each salesman's commissions, and print them out in a report of your own design. All this and more, just for saying "Please."

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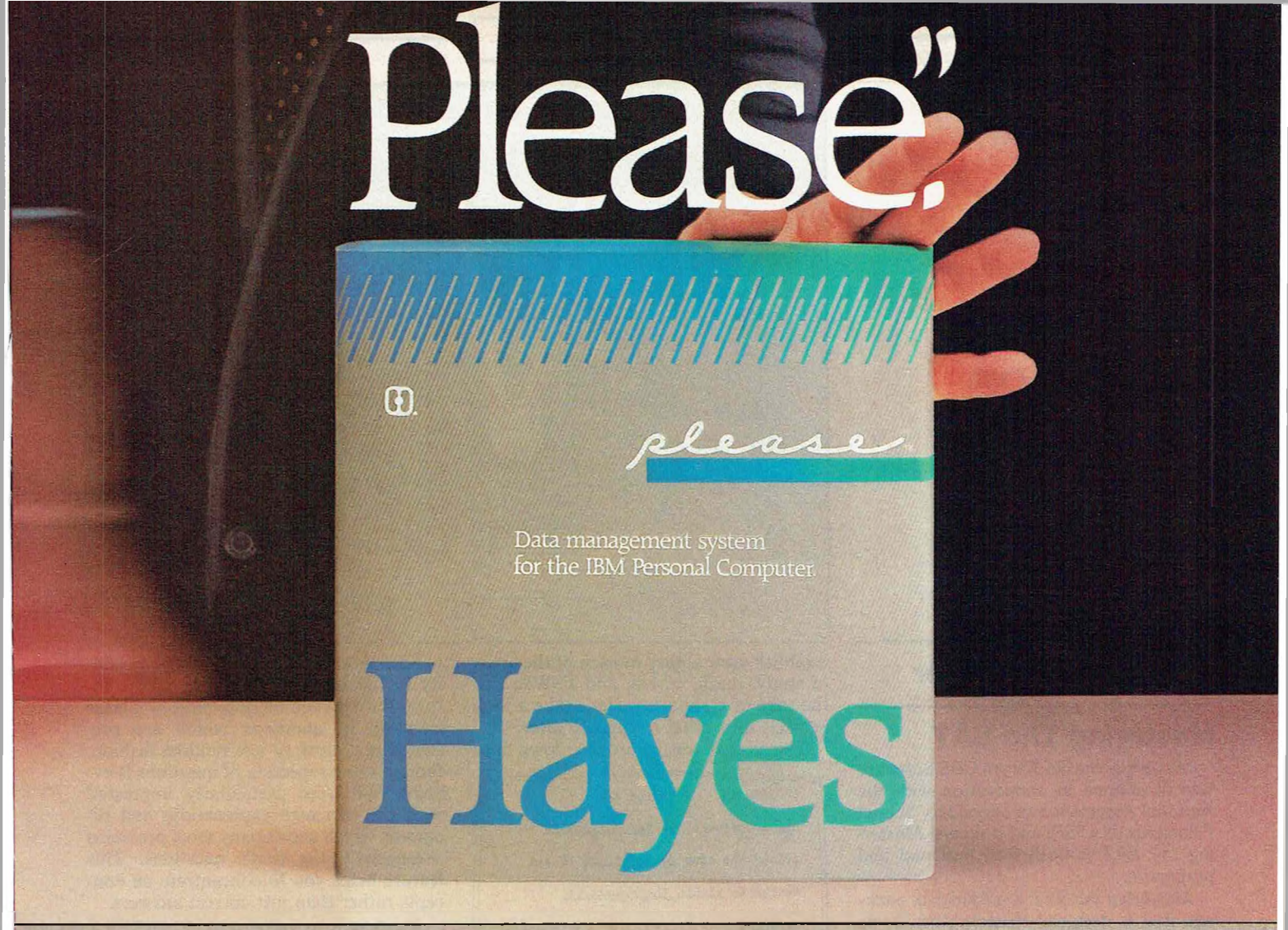

"Put it here, Please."
Design a special screen format to position data in a particular place.

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Now you might think that a data management system that does all this must be difficult to use. Right? Rest assured. *Please* works hard so you don't have to. An easy-to-follow sample disk shows you everything you need to know to create your first database. Three *Please* menus show you which keys to press to access every feature. And whenever you need it, *Please* provides on-screen HELP messages, tailored to a specific task. So you needn't waste time reading through a list of unrelated instructions on your screen. Or stop what you're doing to consult a manual. In no time at all, and with no assistance at all, you'll be a *Please* database pro!

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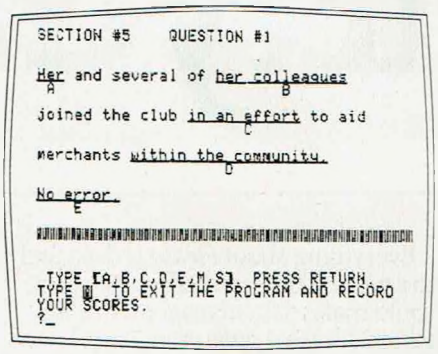
Mastering The SAT

Mastering the SAT from CBS Software was developed in cooperation with the National Association of Secondary School Principals (NASSP) and it shows; *Mastering the SAT* is both well designed and pragmatic.

Mastering the SAT is a four-disk package that is designed to strengthen basic learning skills. There are three operational modes: the Examination Mode, the Instruction Mode, and the Skill Builders Mode. You are encouraged to begin by taking two simulated SATs to establish your ability in each of the areas of study: math, verbal, and TSWE. For the sake of comparison, let's take a look at what the verbal test has to offer.

The verbal test is broken down into four sections, each of which is separately loaded from disk and presented in two parts; opposites, sentence completion, analogies, and reading comprehension. In each section of the test you are presented with a question and provided with five possible answers. You must complete all four sections before your test will be scored.



Upon completion, answers are scored and analyzed. This analysis is very thorough and points out your specific areas of weakness, right down to what types of questions presented problems. A nice feature is that you can get a hardcopy of the analysis by asking the program to send it to the printer as well as the video monitor. Armed with the diagnosis of your test, you then enter the post-test mode which provides an explanation of each question for which you request clarification.

Once you realize where you went wrong and why, you can use the skill builder modules to strengthen your ability to handle those questions in the future. Within each module there is a large selection of questions which are presented in a more or less random fashion, though some repeating of questions is evident. We were particularly impressed with the thorough explanations and diagrams which accompany most problems —especially the math questions. This feature helps you to concentrate on concepts rather than just correct answers.

Documentation

The 148-page, small format, perfect bound documentation booklet begins with general instructions for using the program. Following are 16 pages of test taking strategies, focusing on the various types of questions and skills used in the SAT.

The remainder of the booklet consists of the two simulated SAT tests, their answers, and supplementary material for the mathematics section of the computerized questions.

The tone of the writing in the booklet seems carefully calculated to give the reader confidence without inspiring panic. The suggestions for approaching various types of questions are concrete, and the sample questions increase in difficulty as you become familiar with each concept.

Summary

We recommend *Mastering the SAT* very highly. The price is high for individual users, but should present no problem for most school districts.

The name of the program is significant. CBS wants you to *master* the material in the SAT through understanding

SOFTWARE PROFILE

GOLD

Name: Mastering the SAT
Author: National Association of Secondary School Principals
Type: SAT preparation
System: Apple (reviewed), Commodore 64, IBM PC, and PCjr
Format: 4 disks
Documentation: Thorough; focuses on strategy
Summary: Well designed and pragmatic.
Price: $150
Manufacturer:
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$99.95 each set. Any two sets $179.95. All three sets $279.95.
Each game in the Mental Olympic set is available separately.

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rather than by rote. We like that approach.

Krell's College Board SAT

The Krell SAT package includes 10 program disks covering subjects such as vocabulary, math, sentence completion, analogies, and Test of Standard Written English (TSWE); 47 pages of documentation; and the 6th edition of "The As & Bs of Academic Scholarships."

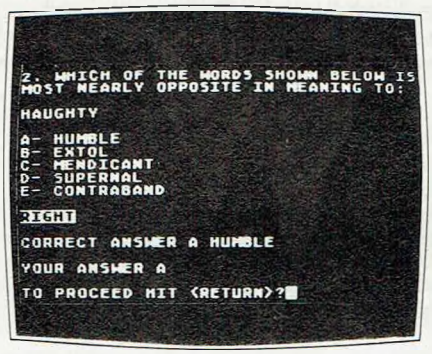
The automatic learning feature, which can be engaged at the start of each session, increases the probability that you will be asked questions similar to those with which you have previously had difficulty.

In the vocabulary section, you select from five possible answers the one that bears the specified relationship with the object word at the top of the screen. If your choice is wrong, you are told immediately and shown the correct answer. In all, there are more than 8000 questions on the two vocabulary disks.

Krell has announced a red label (condensed) version of their College Board SAT Exam Preparation Series. This new multi-program package is designed to provide a condensed practice course to prepare users for the SAT exam.

The Red Label version provides practice for both the math and verbal sections of the exam. The package will retail for $139.95.

The mathematics section gives you the opportunity of viewing how the correct solution was derived after you enter your answer. Then, if you like, you can choose to attempt another similar question. The same type of instant reinforcement is found in the TSWE section. After you determine which part of a sentence contains the grammatical error, the computer gives a



complete explanation of what was wrong with the sentence and names the type of error committed.

Most of the documentation booklet is devoted to supplementary material and sample questions.

Krell's College Board SAT preparation series is a fine package and worthy of commendation.

SOFTWARE PROFILE — SILVER

Name: Krell's College Board SAT
Type: SAT preparation
System: Atari (reviewed), Apple, TRS-80, Commodore 64, IBM PC, PCjr; Kaypro, Acorn
Format: 10 disks
Documentation: Terse instruction manual and informative scholarship booklet.
Summary: Extensive
Price: $299.95
Manufacturer:
Krell Software Corp.
1320 Stony Brook Rd.
Stony Brook, NY 11790
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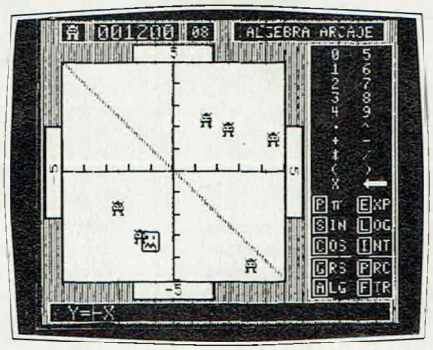
Algebra Arcade

Algebra Arcade is one of those few educational programs that can actually make learning fun. It combines the skill of graphing algebraic equations with the excitement of an arcade game.



Algebra Arcade. After two rounds, six algebroids still remain with the ghost.

Algebra Arcade comes packed with all the equations students need to learn, including lines, quadratic equations, and trigonometric equations. The student creates an equation, and the computer plots it on a grid. The arcade action occurs during the graphing, when the plotted equation tries to eliminate "algebroid" creatures that are scattered around the grid.

The program comes with several other features that add flexibility and keep the game challenging. Students may choose to change the grid coordinates, set up a timer, and test the length of a graph. One especially helpful feature, Practice Field, allows students just learning algebraic graphing to plot equations on a separate grid. This lets them learn on their own outside of the game, and then earn higher scores when they do play.

The manual is thorough, profusely illustrated, and easy-to-understand, and will have students running the program in minutes.

Best of all, as students increase their mathematical knowledge, they can use *Algebra Arcade* over a period of years, from high school to college and beyond.

Algebra Arcade demonstrates that educational software can be creative, enjoyable, and a valuable learning experience. END

SOFTWARE PROFILE — BRONZE

Name: Algebra Arcade
Type: Educational game
System: Apple, Atari, IBM PC, Commodore 64
Format: Disk
Summary: An innovative educational arcade game to teach graphing of algebraic equations.
Price: $49.95
Manufacturer:
Wadsworth Electronic Publishing Company
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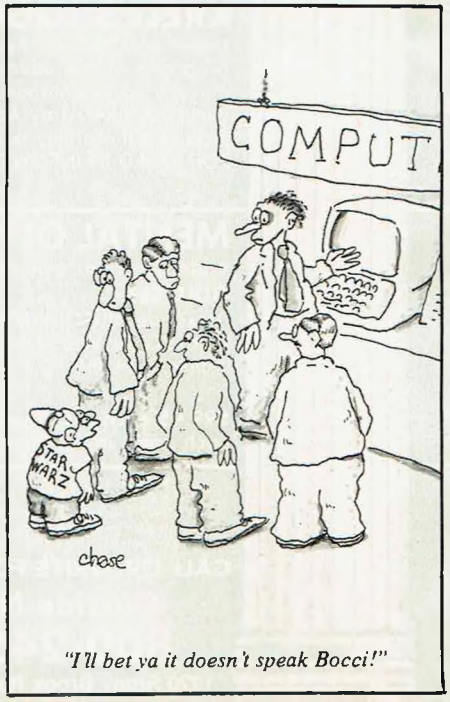
Belmont, CA 94002
(415) 595-2350



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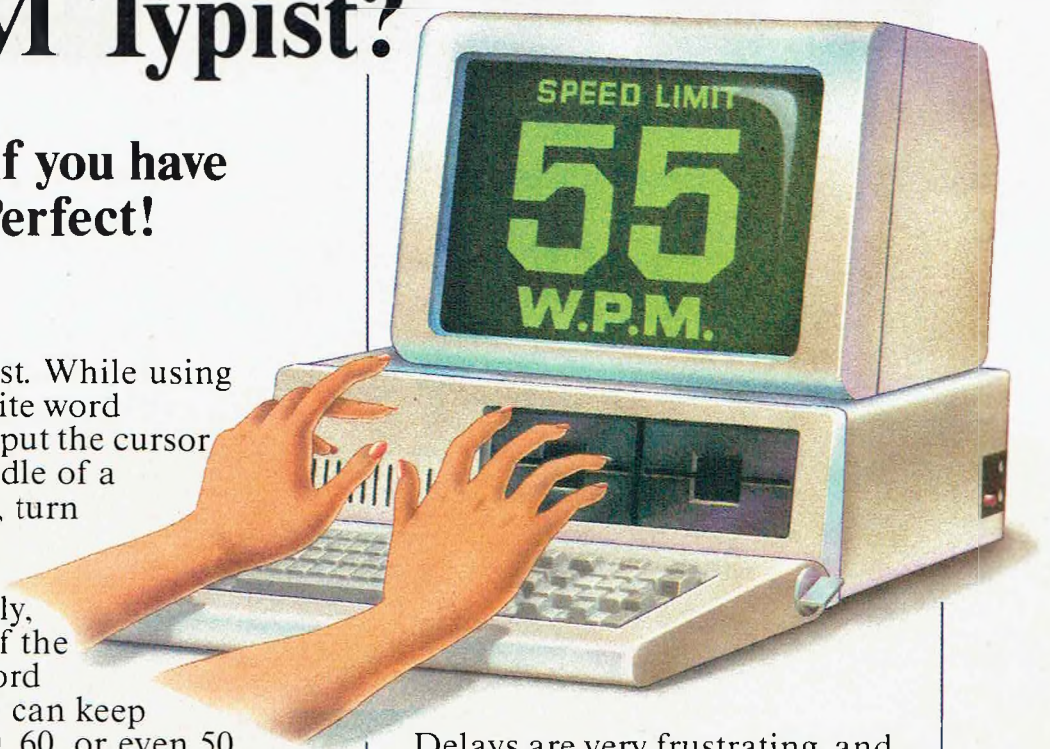

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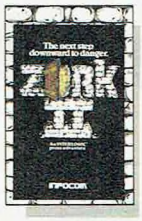
The next step downward is danger.
ZORK II
INFOCOM

It all comes down to this.
ZORK III
INFOCOM

A LOCKED DOOR. A DEAD MAN.
And 12 Hours to solve the murder.
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DEADLINE

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The WITNESS
SOMEBODY'S GOING TO TAKE THE DEEP SIX!

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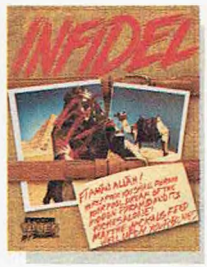

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*Use the IBM PC version for your Compaq, and the MS-DOS 2.0 version for your Wang or Mindset.

CIRCLE 125 ON READER SERVICE CARD

Award Winners

Games For The Apple

Steve Williams

Lode Runner

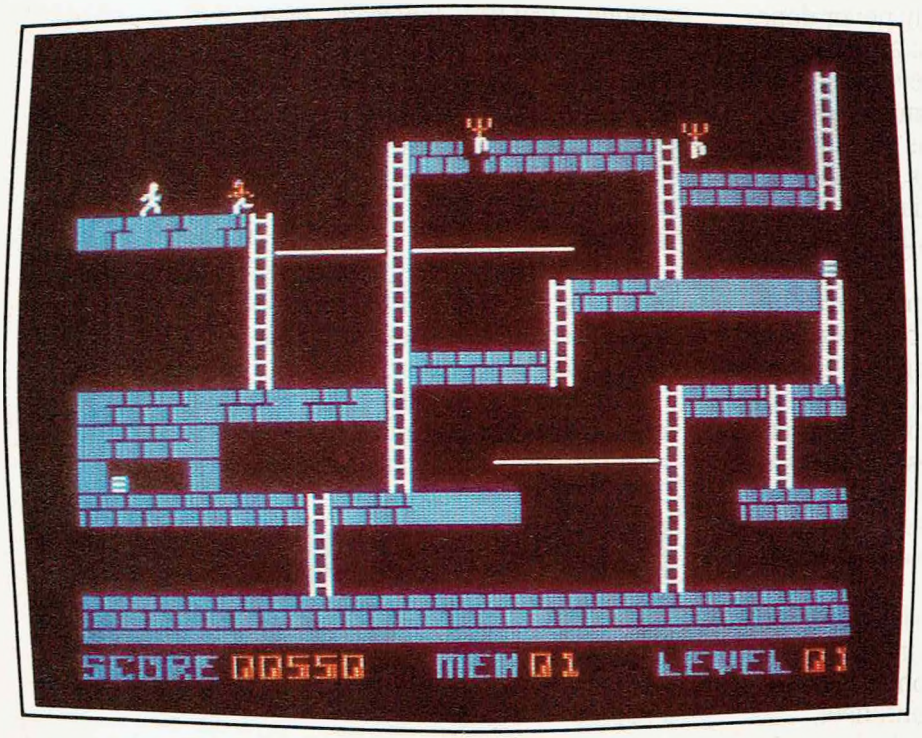
Lode Runner is an action game system that simulates the mission of a galactic commando deep in enemy territory. The enemy, known as the Bungeling Empire, has stolen a fortune in gold from the player's peace-loving people. The player's objective is to enter the enemy's underground treasury and recover the gold.

The treasury consists of 150 elaborate screens that resemble somewhat the diggable floors and ladders of *Apple Panic*. *Lode Runner*, however, offers additional features that are uniquely its own, including undiggable floors, trap doors, and horizontal climbing bars.

The player is an animated humanoid armed with a pistol that can blast away portions of the floor, leaving holes that refill approximately ten seconds later (at normal game speed). Blasting can be used to create an exit or to trap the Bungeling guards, who can be crushed if they fall in and are unable to escape in time. While contact with a guard usually means death for the commando, he can walk freely upon trapped guards as though they were part of the floor.

Running, jumping, climbing, and avoiding enemy guards, the player must retrieve chests of gold scattered throughout the treasury. Recovering all of the gold in a scene causes a special ladder that leads to the next level to appear.

With 150 different screens each of which requires a different strategy to complete, *Lode Runner* offers a seemingly endless challenge. Even when played for hours on end, dozens of scenes still remain



Lode Runner

SOFTWARE PROFILE

GOLD

Name: Lode Runner

Type: Action

Author: Doug Smith

System: 48K Apple II+ and IIe, Atari, C-64, Vic 20, IBM PC

Format: Disk, cartridge

Summary: A superb, 150-scene commando mission

Price: $34.95; C-64 cartridge $39.95

Manufacturer:
Broderbund Software
17 Paul Dr.
San Rafael, CA 94093
(415) 479-1170

to be explored. Moreover, a strong addiction builds in struggling to reach new screens.

This game requires more thought than the typical action game, especially at the higher levels. Some screens were so involved that I paused to examine them for nearly a minute before taking action.

The only weakness of this program is a minor one. At the start of every scene or after the player is killed, the video display slowly takes a circular form, closes in aperture to a central point, and then opens again. This action takes approximately ten seconds and soon becomes unpleasantly repetitive.

Lode Runner is not only a fascinating game but also a powerful game building utility. "Generator mode" allows players to create their own scenes. This involves moving the cursor to various screen positions and then designating what should occupy them. The process, which uses single keystrokes, is fast and easy to learn.

Lode Runner is demanding, addictive, flexible, and thought provoking. All in all, it is an outstanding game.

SOFTWARE PROFILE — SILVER

Name: The Heist

Author: Mike Livesay

Type: Arcade adventure

System: Apple (reviewed), Atari, IBM, ColecoVision, C-64; joystick

Format: Disk; Coleco cartridge

Language: Machine

Summary: Exciting combination of adventure and arcade action.

Price: $40 - 45, depending on system

Manufacturer:
MicroFun
2699 Skokie Valley Rd.
Highland Park, IL 60035
(800) 323-9083

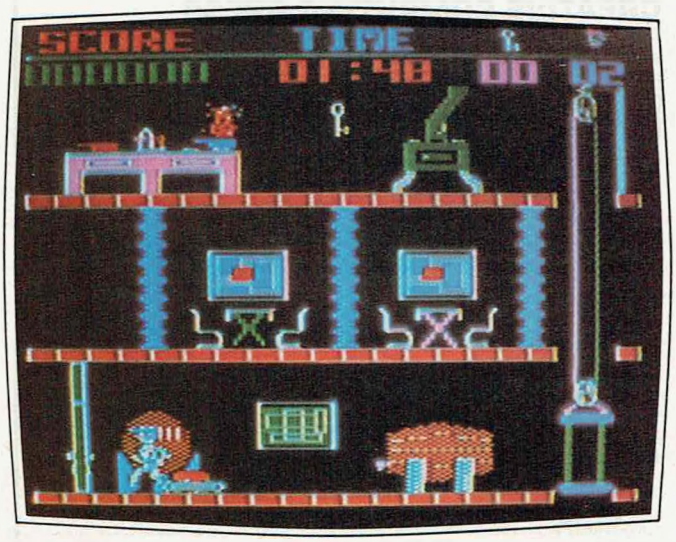
The Heist

Although it has not been on the market for very long, *The Heist* is fast on its way to becoming one of the most popular Apple arcade games of all time. Written for the Apple by Mike Livesay of *Miner 2049er* fame, *The Heist* has already been translated to almost every popular home computer.

The object of *The Heist* is to retrieve pieces of art from a museum in the hopes of finding an elusive microdot that contains information vital to world survival. You control Graham Crackers, the hero, and must avoid the various alarms, robots, traps, and other pitfalls that are found scattered throughout the museum rooms, all the while racing against time.

One of the most amazing things about *The Heist* is the large number of rooms. There are three levels, 48 screens per level, and three rooms on each screen. This comes to a total of 144 different rooms in the game, each posing its own unique puzzle and problem for Graham. The only disadvantage to having such a great number of rooms is that each screen must be loaded in from disk every time you change rooms.

The Heist has all of the necessary ingredients of a successful game: captivating hi-res graphics, interesting sound effects, an almost endless variety of situations, and gameplay that remains exciting. Mike Livesay and MicroFun deserve the thanks of Apple owners worldwide.



The Heist

Pinball Construction Set

Do you like pinball? If you do, you'll like playing pinball on a microcomputer. You'll enjoy *Raster Blaster, David's Midnight Magic,* and *Night Mission.* All three simulate pinball machines quite impressively.

What could be more fun than playing microcomputer pinball? Why, designing your own pinball machines, of course. Using *Pinball Construction Set*, you can design your own original pinball games and save them to disk.

What does *Pinball Construction Set* have in common with the Apple Macintosh? Both use pointer technology to get things done. Using your joystick as "mouse," you move the gloved pointer around the screen, picking up and moving parts around at your own whim and fancy. The program uses a system of pointers and icons similar to those used on the Apple Lisa and Macintosh.

The process of game construction can be as simple or as sophisticated as you please. If you do decide to get serious, serious tools are available to you. These include tools to shape and paint the board, magnify areas for detailed work, reset point and bonus values, and alter gravity, speed, and bounce.

Multi-flipper games can be created with very little effort, but creating a game that has that special "something," like *David's Midnight Magic*, will take more than a bit of trial and correction. Playtesting is fun and corrections are easy to make. After a prototype has been refined to a point where it really plays, you can polish it up, make it pretty, and save the result permanently to disk.

If you are a pinball fan, *Pinball Construction Set* is a must for your software shelf. If you are not a pinball fancier, this game will change you into one. END

SOFTWARE PROFILE — BRONZE

Name: Pinball Construction Set

Type: Pinball simulation

System: Apple, Atari, C-64

Format: Disk

Language: Machine

Summary: As much fun to make as it is to play.

Price: $40

Manufacturer:
Electronic Arts
2755 Campus Drive
San Mateo, CA 94403
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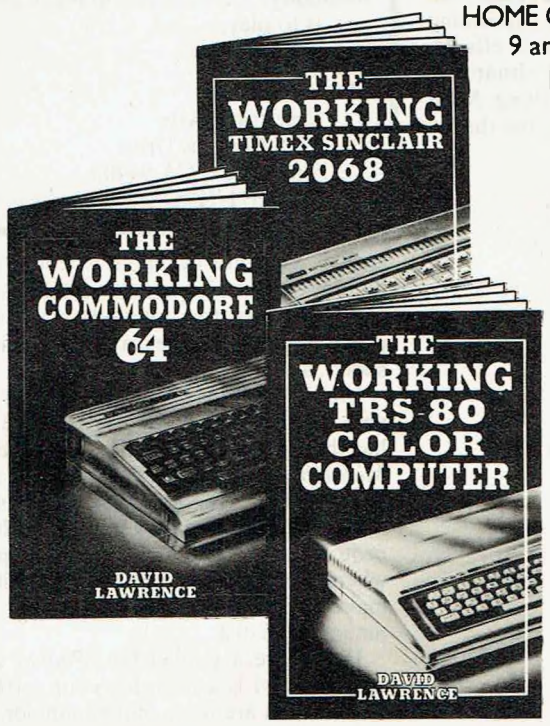

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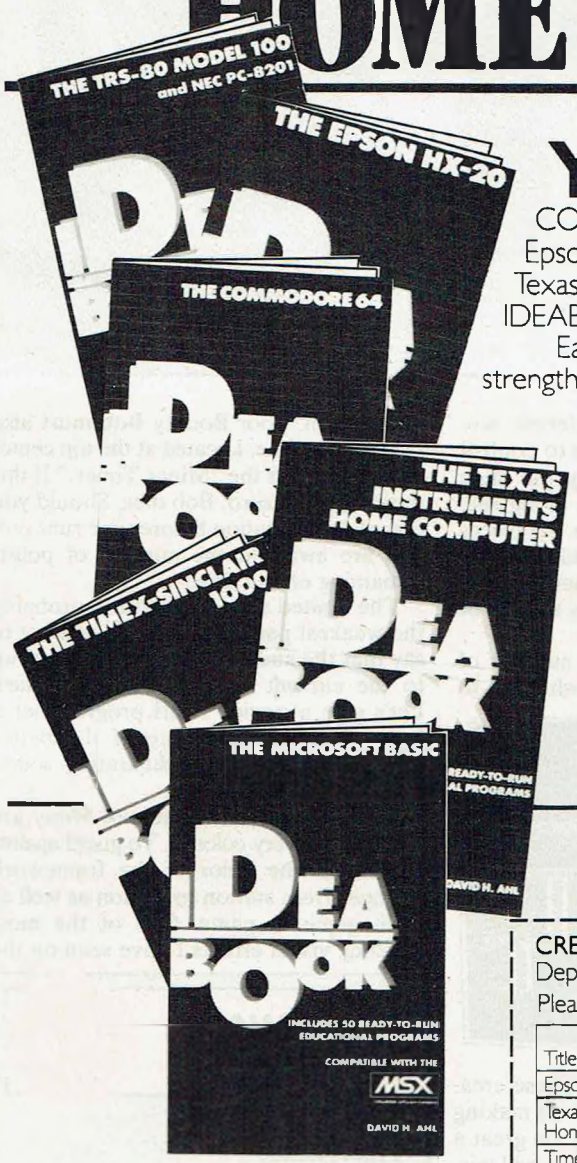

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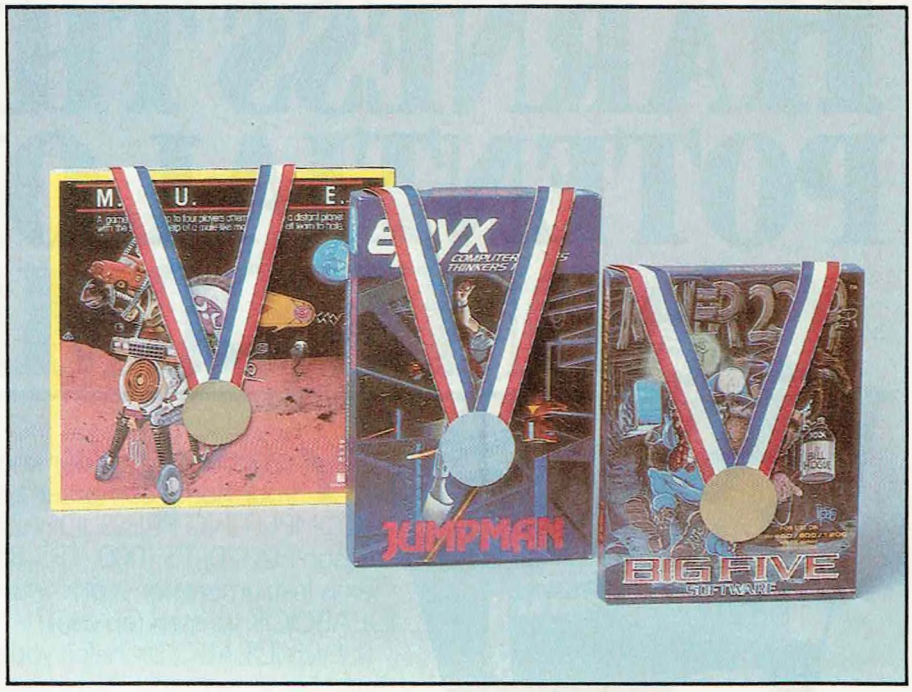
Games For The Atari



Owen Linzmayer

Miner 2049'er

Big Five, one of the leading software producers for the TRS-80, has introduced its first Atari 400/800 arcade game, *Miner 2049'er*. When I heard that the folks at Big Five were attempting to write an Atari program, I was a bit skeptical. After all, these guys know the TRS-80, not the Atari. After playing *Miner 2049'er*, I realized that my worry was for naught—*Miner 2049'er* promises to be one of the most popular Atari programs in any software library.

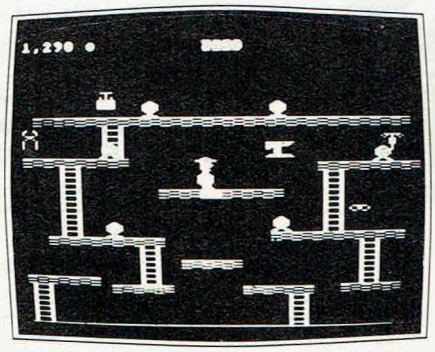
Miner 2049'er is written entirely in machine language by the president of Big Five, Bill Hogue. The whole program is crammed into a huge 16K ROM cartridge.

When you first see *Miner*, you can't help making comparisons between it and Donkey Kong. *Miner 2049'er* is similar to Nintendo's coin-op game in that they are both multi-level games in which the player jumps and scuttles about on a building framework. From there on, *Miner* proves to be much more than a variation of Donkey Kong.

Whether you are playing a one- or two-player game, your character, Bounty Bob, is controlled using one standard Atari joystick plugged into jack 1. To move Bob left, right, up, or down, simply point the joystick in the appropriate direction. To jump straight up, press the red fire button. If you want to jump from one place to another, you must be moving in the direction you want to jump when you press the button.

Whereas Donkey Kong has only four screens, *Miner* has a stupefying ten separate boards, each with a different scenario. In general, the object is to control Bounty Bob and "claim" all of the mine stations. Whenever you walk along sections of framework in the mine, the pieces under your feet will turn solid in color. To claim a station and advance to the next one, you must fill in every section of framework.

Bounty Bob can die in a number of ways, the most common of which is to



run into a mutant organism. These creatures roam the mines in hopes of making your visit a short one. Falling too great a distance will also prove lethal, as will miscalculating a jump.

In addition to the deadly mutant creatures, every mine station has specific hazards that you must avoid (such as pulverizers, explosives, and slides). Scattered throughout the mine are various articles that have been lost by previous expeditions. To grab these objects, simply touch them. Points are awarded, and for a short time the mutants will turn green. While green, a mutant dies if you touch it.

As if dealing with all of these dangers is not enough, poor Bounty Bob must also race against time. Located at the top center of the screen is the "Miner Timer." If this timer reaches zero, Bob dies. Should you complete the station before time runs out, you are awarded the number of points remaining on the timer.

The limited sound effects are probably the weakest part of *Miner*. That is not to say that the audio is poor; it is just not up to the current standards for the Atari. Let's give a novice Atari programmer a little time to learn some of the better tricks for producing exhilarating sound effects.

The graphics in the game of *Miner* are detailed and very colorful. To guard against repetition, the color of the framework changes from station to station as well as from game to game. One of the most dazzling visual effects I have seen on the

SOFTWARE PROFILE

GOLD

Name: Miner 2049'er

Type: Arcade

System: Apple, Coleco, IBM, C-64, Vic 20

Format: ROM cartridge

Language: Assembly

Summary: Excellent multi-level game

Price: $49.95

Manufacturer:
Big Five Software
P.O. Box 9078-185
Van Nuys, CA 91409
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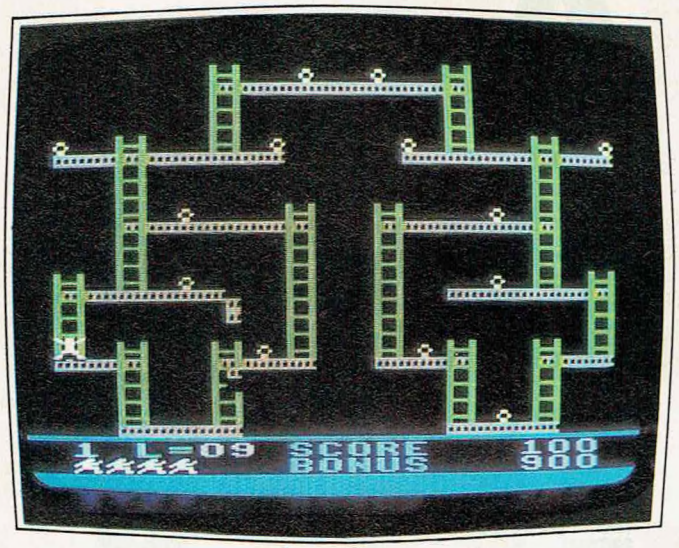
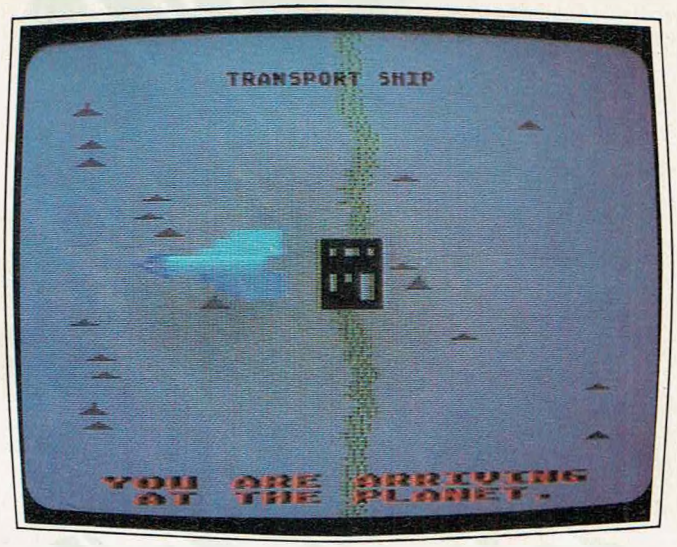


Jumpman.



M.U.L.E.

Atari is the animation of Bounty Bob dematerializing as he teleports from platform to platform using the elevators. *Miner* does not push the Atari to its full graphics potential, but it more than makes up for that in its limitless playability.

As mentioned earlier, *Miner 2049'er* has ten independent mining stations (game boards). The first three sections are fairly easy to complete with practice, but the game gets much more difficult after that. Luckily, Bill sent me a copy of *Miner* that allowed me to "skip" to any station I wanted. If I hadn't received this special version of the program, I doubt that I would ever have seen what lies beyond the fifth station.

If you are skillful enough to accumulate a high score, you can add your name to the high score table. Unfortunately, the scores disappear when you pull the cartridge from the slot.

A multitude of stations and ever-increasing difficulty make *Miner* a game that is virtually impossible to master. *Miner 2049'er* is a great game—no doubt about it.

Jumpman

The hero of *Jumpman* is a small white figure whose mission is to disarm bombs placed in locations of varying accessibility on the playscreen. To disarm the bombs, he has only to touch them, but to get to them he must often climb ladders and leap gaps in the girders on which he climbs.

Each of the 30 screens is different. Each has a different arrangement of girders, ropes, ladders, and bombs, and each has a different hazard that must be avoided. Hazards include "intelligent" bullets that go out of their way to find you, vampires, bats, hailstones, and "jumping blocks." You will lose many jumpmen experimenting and learning your way around each screen, and even when you have mastered a given screen, you must remain alert for the unpredictable hazards.

You earn points for each bomb that you disarm, and you can accumulate bonus points by moving swiftly and smoothly to complete a screen before the bonus timer runs out. The top ten scores and bonus scores are saved on disk.

Jumpman has everything we like in a game. It is very playable right from the start, so first time players don't become discouraged. It allows you to improve as you practice and learn. It has clever little tricks to challenge your ingenuity. It offers just the right amount of randomness in the form of the hazards to keep you from getting bored. And it bolsters your ego by recording your high scores.

SOFTWARE PROFILE

SILVER

Name: Jumpman

Type: Arcade game

System: 32K Atari, 48K Apple, Commodore 64

Author: Randy Glover

Format: Disk and cassette

Language: Machine

Summary: Challenging fun for all ages.

Price: $39.95

Manufacturer:
Epyx/Automated Simulations
1043 Kiel Ct.
Sunnyvale, CA 94089
(408) 745-0700

M.U.L.E.

M.U.L.E. is a very rare game—one that embodies the best in home entertainment programs: a good concept and follow through; professionally mounted, executed, and debugged; imaginatively packaged; documented thoroughly and with wit.

Best of all, *M.U.L.E.* has depth. Each game is different. Each prepares the player to do just a little better next time. And though it is a competitive game, *M.U.L.E.* also demands cooperation for success.

Also, there is no shooting to be found anywhere in the game—how positively refreshing.

The acronym *M.U.L.E.* stands for "multiple use labor element," and without mules, players of *M.U.L.E.* would have no way to get things done. Terraforming an alien planet is no piece of cake, you know. Each round of play begins with a land grant, during which the players vie for plots of real estate. The task at hand: colonize.

And yet the game of *M.U.L.E.* is not really one of science fiction—it is one of capitalism. Players vie to reap the economic rewards to be squeezed from this harsh environment: food from the river valley, energy from the alien sun, and minerals (smithore for building and crystite for hoarding and trading) from mining operations.

M.U.L.E. turns out to be a vibrant and living model of the free enterprise system at work. Prices are set by supply and

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CIRCLE 128 ON READER SERVICE CARD

SOFTWARE PROFILE

BRONZE

Name: M.U.L.E.

Authors: Bill Bunten, Dan Bunten, Jim Rushing, Alan Watson

Type: Multiplayer strategy game

System: Atari, C-64

Format: Disk

Language: Machine

Price: $40

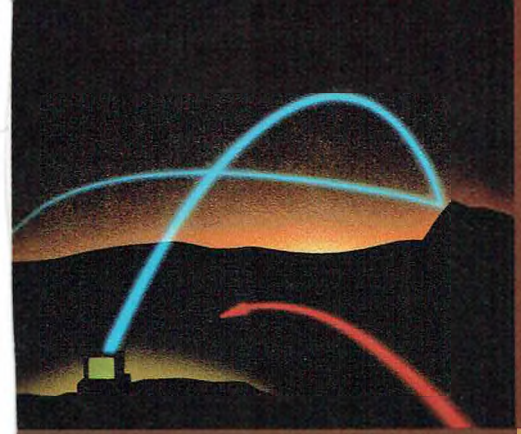
Summary: The kind of game that shows what microcomputers are for.

Manufacturer:
Electronic Arts
2755 Campus Dr.
San Mateo, CA 94403
(415) 571-7171

demand. Economies of scale provide increased productivity for adjacent plots under a single commodity and owner. The learning curve theory of production provides increased productivity over time. The law of diminishing returns eventually acts to mitigate these effects. The prisoner's dilemma penalizes excessive selfishness. The documentation describes how all these effects work and how best to harness them.

It is impossible to do justice to a description of this game in a capsule summary. It has a richness of thought behind it that exceeds the playability of "twitch" games requiring only fast hand-eye coordination. And yet it plays as smoothly and colorfully as a quick game of Mario Bros.

M.U.L.E. will probably remain the best example of a program interweaving entertainment with education for some time to come—possibly a decade or two. It is a superlative product. END



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6. Set the eight binary switches (consult your manual for details).
7. Carefully close the case.
8. Plug the telephone line into the modem.
9. Plug the modem into the computer.
10. Turn on the computer.

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Frogger

Many games boast action so quick and graphics so clear that they make you think you are in an arcade. Sierra On-Line's licensed version of *Frogger* for the Commodore 64 is one of them. But unlike many others, *Frogger* holds true to its claim. It is the best version of *Frogger* I have seen for any machine.

The object of *Frogger* is to guide your frog safely across a busy highway, over a river, and home to his lilypad in the allotted time (120 beats of the timer). To accomplish this successfully, he must cross the highway without being run over and cross the river without falling in. The latter seems rather strange considering that frogs are very adept at swimming.

Your frog must avoid cars, trucks and bulldozers, deadly snakes, otters, crocodiles, and the treacherous diving turtles. After five frogs have made it to their lilypads, you advance to the next level.

You move your frog vertically and horizontally using a joystick or, as with *Crossfire*, the redefinable keyboard. *Frogger,* however, lends itself much more to keyboard use than *Crossfire.* The responsiveness of both the joystick and the keyboard is outstanding. Your frog moves as fast as you can press the joystick or hit a key.

The screen is split into two main parts, the highway and the river. The highway, the first obstacle to be overcome, is located at the bottom of the screen. Situated in between the highway and the river is a narrow strip which in the lower levels offers refuge from danger. In the higher levels this area is patrolled by a dangerous slithering snake. At the top of the screen is the river and your final destination—the lilypads.

Much care has been taken in creating the *Frogger* graphics. The sprite animation of the frog is extremely realistic. It looks much better than the arcade frog. Details such as the tread on the bulldozers, which are made to look as if they are actually turning, are outstanding. The excellent three dimensional logs and the "Game Over" sign which glides across the screen atop a log make On-Line *Frogger* a great replica of the arcade version.

As in the arcade version the music is non-aggressive and has a winsome melody. Also, bonus points are awarded for gobbling insects, escorting ladies home to your lilypad, and completing a level.

When I first read about the Commodore 64, I revelled in the thought of

Frogger

Jump on 10 monsters, 64 screens and 3-D graphics with Pogo Joe.

A Mutated Wonderwhisk whisks by. The Spinning Top almost topples him!

Close. But Pogo Joe™ bounces back. Bouncing from cylinder to cylinder, screen to screen, Pogo Joe racks up point after point.

You guide him from cylinder to cylinder, changing the color on top of each. Change the top of each cylinder on a screen, then you're on to the next.

The more screens you complete, the nastier the monsters you face, and the faster they attack.

Press the fire button! Jump two cylinders to safety. Hop into a transport tube, and then whoosh! Pogo Joe appears across the screen. Jump on an escaping monster. Blam! It's gone in a flash! Only to reappear out of thin air.

Keep bouncing Joe to original music on realistic 3-dimensional cylinders. All the characters in this rollicking game are also 3-dimensional and fully animated. The graphics almost jump off the screen, leaving the arcades behind.

Golden Floppy Award for Best Animation
Computer Games Magazine

1984 Outstanding Software Award
Creative Computing Magazine

"One of the most addictive and playful games we have seen..."
Creative Computing

"The element of whimsy... makes it one of the most original, imaginative and fun games ever!"
Computer Fun Magazine

"Has it all... cute but strategic... excellent graphics and bouncy music!"
Computer Games Magazine

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K Power Magazine

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Pogo Joe in 48-64K on the Atari and Commodore 64. See your local software dealer.

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SOFTWARE PROFILE GOLD

Name: Frogger
Type: Arcade game
System: Commodore 64
Format: Disk/Cassette
Author: Chuck Benton
Summary: Excellent version of arcade Frogger.
Price: $34.95
Manufacturer:
Sierra On-Line, Inc.
Sierra On-Line Bldg.
Coarsegold, CA 93614

the games that could be made with its sophisticated high-resolution graphics. *Frogger* comes very close to the games I envisaged. Perhaps Commodore, too, had games such as *Frogger* in mind when they dubbed the 64 "The most brilliant game machine you can buy."

Zaxxon

The arcade game Zaxxon had its day in the sun about a year ago, and while it never achieved the fame and fortune of Defender or Pac-Man, it did attain a sort of cult status that remains to this day.

In the game, you assume the role of a jet pilot strafing an enemy stronghold in space. You swoop over anti-aircraft guns, radar installations, fuel dumps, and missile silos, firing all the while. If you manage to survive a strafing run, you tussle with enemy aircraft in the blackness of space before heading into the next round of the game.

It may sound as if Zaxxon is just another shoot-'em-up, but that is not the case at all. The thing that really makes Zaxxon fly is its graphics. The screen is a three-quarter view in solid multicolor with your jet and the background scenery rendered in three-dimensional perspective. As you fly, the terrain below scrolls by smoothly. Zaxxon in the arcade is a graphics tour de force.

Certainly then, translating Zaxxon for home computers poses a very great challenge. Packing all the features of the arcade version into a 48K or 64K machine is nearly an impossibility. In fact there is probably no better gauge of graphics, sound, and animation potential of a microcomputer than the quality of the Zaxxon available for it.

The TRS-80 Color Computer version of *Zaxxon* won a gold medal in its category (see the review by Owen Linzmayer elsewhere in this issue). Apple and IBM versions have proved disappointing, and even the Atari version left something to be desired.

SOFTWARE PROFILE SILVER

Name: Zaxxon
Type: Arcade game
System: Commodore 64
Format: Disk/cassette
Language: Machine
Summary: Most playable, authentic Zaxxon available.
Price: $39.95
Manufacturer:
Synapse Software
5221 Central Ave.
Richmond, CA 94804
(415) 527-7751

Then, long after the fact, and from a surprising source, the C-64 version of *Zaxxon* appeared. It is far and away the best version available for any home computer, and sports graphics and sound comparable to the arcade version.

When I first saw the game at the Synapse booth at Winter CES, I was convinced it was a videotape of the actual arcade game. When I realized it was, in fact, running on a C-64, I was amazed.

If you own a C-64 and don't enjoy shoot-'em-ups, you may change your mind after playing *Zaxxon*. If you enjoy shoot-'em-ups but don't own a C-64, get one—it will change your mind about the machine.

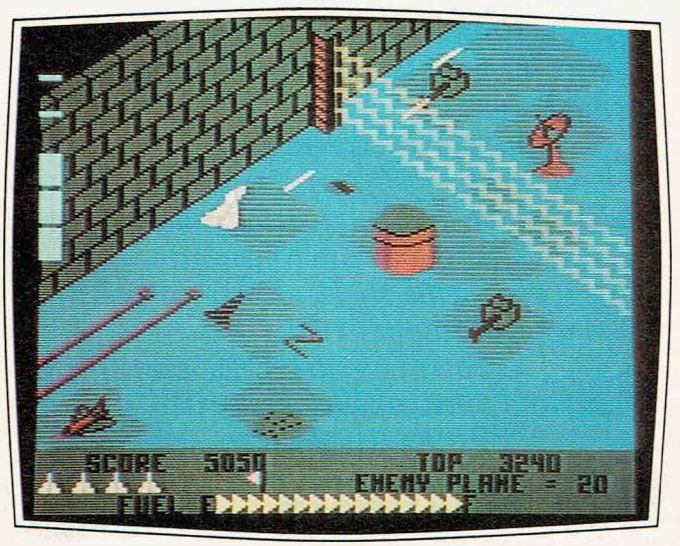
Pogo Joe

Pogo Joe is a distant cousin of Q*bert, but unlike Q*bert, Pogo Joe bounces around on a pogo stick and is somewhat more "player friendly." Moreover, he has 64 different screens on which to bounce around.

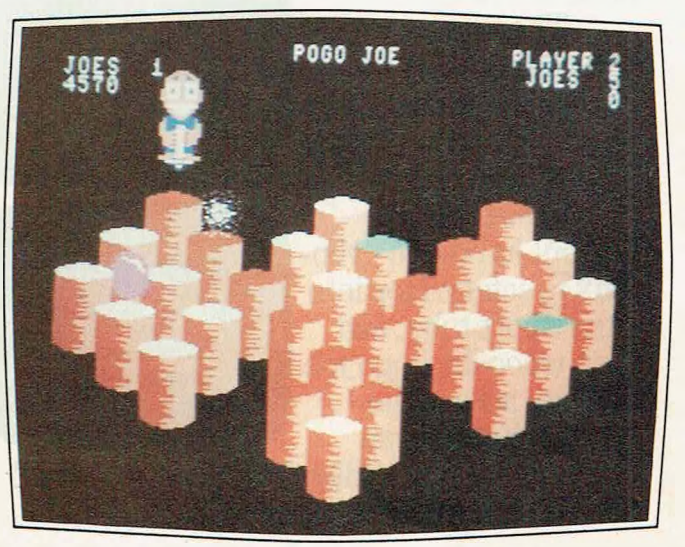
The object of the game is to make Pogo Joe change the colors of the tops of groups of cylinders. You move him around with a joystick, and each time he jumps onto a cylinder it changes color. Unlike Q*bert, Pogo Joe is smart enough not to jump off the cylinders into the great void; if you push the joystick in a direction where no accessible cylinder exists, he will simply hop up and down. When all the tops are changed (later screens take two or three jumps to change a cylinder into the target color), a new screen appears.

As each new screen appears, Pogo Joe materializes in a random location on top of a cylinder. Thus, it is difficult, if not impossible, to work out playing patterns, and the game presents a new challenge each time you play.

Sharing the screen with Pogo Joe are several creatures. They explode onto the



Zaxxon



Pogo Joe

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screen as eggs, which Pogo Joe can catch. But after a few bounces, the eggs hatch into various toy monsters. The yellow ones run away from Joe, and he gets points for catching them. The more dangerous purple and blue ones chase Joe and cause him to lose a life if one catches him. The red guys change the cylinder tops back to their original colors as they jump around.

Each board has one or more flash tubes which, when jumped upon, explode all the monsters and eggs on the screen at that time. Later boards have two or more transport tubes which move Pogo Joe to another transport tube when jumped upon.

All monsters and eggs are worth 250 points, and a bonus Pogo Joe is given for each 5000 points. The top ten scores are recorded on the disk. Just to give you some incentive, the game designer, William F. Denman, Jr., has left two scores on the disk, 16,120 (which will soon disappear) and 207,900 (which will not).

After the title screen, a menu screen appears which allows you to structure Pogo Joe for the number of players (one or two), joysticks, starting screen, speed of Pogo Joe (0 to 6), speed of monsters (0 to 6), and whether monsters are allowed to double jump. The RUN/STOP key will pause the game at any point.

Some of the boards present a greater challenge than just jumping. On board 5, Enzyme Stew, for example, the cylinders disappear after they are jumped upon. On board 10, Heart Like A Head, the cylinders are invisible until they are jumped upon. The names of the boards occasionally are descriptive, but more often just cute, for example, Mutant Street, Terror Lunch, Lopsided, Lumpy Gravy, Fish Head, The Pits, and ARRGH!

The music and sound effects signal various events (losing a life, gaining a new life, birth of a monster, etc.) but we quickly tired of the rather short repetitive tune that constantly plays in the background. But that is what the volume control is for.

All in all, *Pogo Joe* is one of the most addictive and playable games we have seen. We tried the Commodore 64 version, but we assume the Atari and IBM versions are similar. END

SOFTWARE PROFILE

BRONZE

Name: Pogo Joe
Type: Arcade game
Authors: W.F. Denman, Jr. and O.W. Steele
System: C-64, Atari, joystick needed
Format: Disk or tape
Summary: Highly playable and addictive.
Price: $24.95
Manufacturer:
ScreenPlay
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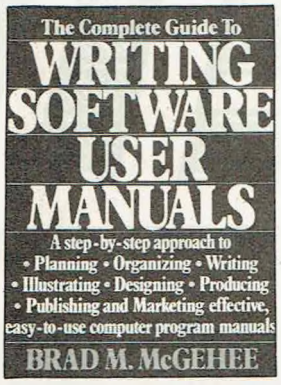

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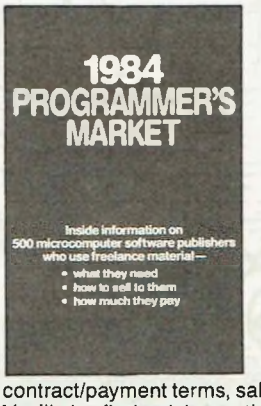

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Edited by Brad M. McGehee

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Games For The IBM PC

Will Fastie

Flight Simulator

Microsoft's *Flight Simulator* puts you in the pilot's seat as it turns your IBM PC into a single engine aircraft. Quite simply, with all the outstanding features of the program it makes the best flight simulator we have seen. The fact that it runs on the IBM PC, a machine for which relatively little recreational software exists, makes it all the more exciting.

The *Flight Simulator* graphics are stunning. Eight cockpit windows give you a 360-degree field of view. A color monitor will show the white and gray clouds, deep blue water, and green ground scrolling smoothly past you at 15 frames per second—about the same speed as home movies.

The instrument panel displays all the indicators, and the controls are easy to use once you have learned the basics of flight. Not to worry, for *Flight Simulator* comes with a 100-page manual containing an excellent glossary, good diagrams, and a big section on how to fly. The 10 preset modes on the program allow you to select one of several flight situations, including night flying, bad weather flying, and emergency situations.

The simulated world stored on disk is large. You can take a leisurely flight over five major areas of the United States: Seattle, WA; Los Angeles, CA; Chicago, IL; Boston, MA; and New York, NY. Altogether, you can tune into 38 VOR navigation beacons, recognize numerous landmarks, and land at 22 airports.

Better yet, *Flight Simulator* contains an exciting combat option called British Ace, which lets you take to the air in a dogfight with the Red Baron and the rest of his Flying Circus.

Flight Simulator will have experienced pilots and rank novices swaying with each maneuver. It is a realistic, extensive, and visually exciting flight simulator.

Flight Simulator.

SOFTWARE PROFILE GOLD

Name: Flight Simulator

Type: Airplane flight simulator

System: 64K IBM PC with color graphics adapter, Colombia, Compaq

Format: Disk

Summary: An extensive and realistic flight simulator

Price: $49.95

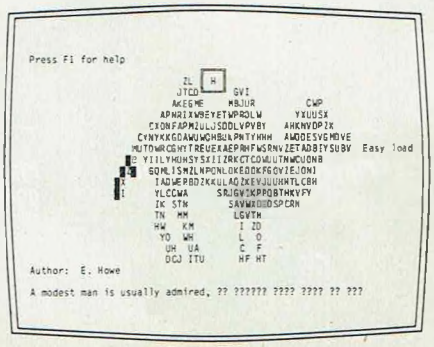
Manufacturer:
Microsoft Corp.
10700 Northup Way
Bellevue, WA 98004
(206) 828-8088

Quotrix

Quotrix is a word game in which the guessing of a series of mystery words leads to the satisfying completion of a quote from a well known person. Before the game begins, you have the opportunity to choose one of six skill levels and to set the number of players. As you begin the game, you see at the bottom of the screen the name of the person being quoted and a series of words all of whose letters have been replaced by question marks.

There are three "puzzle formats" selected at random by the program to help you guess the words in the quote. Load the Camel's Back is Middle Eastern style Hangman: you guess the letters in the word. If your guess is correct, the letter is filled in; if not, a letter is added to the camel's burden.

The second format is Word Jumble, a timed exercise in which you use the cursor



Load the Camel's Back.

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Intelligent Microprocessor	✓	✓	✓	✓	✓
Tone and Pulse Dialing	✓	✓	✓	✓	✓
Hayes Command Compatible (Works with Smartcom™)	✓	✓		✓	
Additional telephone jack with exclusion switching	✓				
Analog loop back self test	✓	✓	✓		
Self Test at Power Up	✓		✓		
Call Progress Detection (Busy, Dial Tones, Trunk Busy, etc.)	✓		✓		
Speaker and External Volume Control	✓	✓	✓		
Full Complement of Status Lights	✓	✓	✓		
8 Switch Selectable power-up defaults	✓	✓			
Adaptive Dialing	✓				
Auto Redial on Busy	✓				
Ergonomically designed easy to read front display panel	✓				
Internal Stand-Alone Power Supply	✓				
Built in Real Time Clock/Calendar	✓				
Help Command	✓				
300 baud connect while maintaining 1200 baud RS-232 link	✓				

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Auto Logon Macros	✓
Auto message transmission to groups of numbers	✓
Records call duration	✓
12-character Alphanumeric Display	✓

*Comparison made by Prometheus on the basis of the best information available to Prometheus at time of printing.

CIRCLE 134 ON READER SERVICE CARD

control keys to rearrange the letters of a scrambled mystery word. The third format requires you to choose from a list of about a dozen topics. The program then asks a simple question about that category. When the grid on the screen has been filled in with correct answers, one of the vertical columns spells the mystery word.

We have found that *Quotrix* has amazing staying power. The supply of quotes seems limitless, and we just keep coming back for more. After you have a few good scores on the disk, the temptation to keep trying to better them becomes almost irresistible.

SOFTWARE PROFILE — SILVER

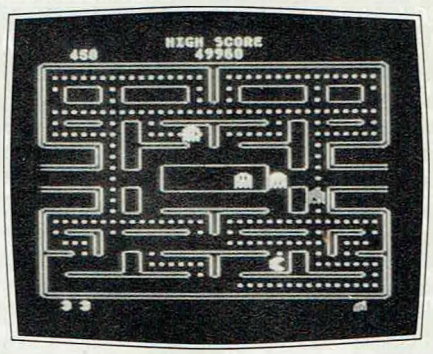
Name: Quotrix
Type: Word game
System: 64K IBM PC
Author: Jeremy Wilson
Format: Disk
Summary: Solving puzzles reveals the mystery quote.
Price: $34.95
Manufacturer:
Insoft, Inc.
P.O. Box 608
Beaverton, OR 97075
(503) 641-5223

Pac-Man

Poor IBM PC. So serious. So business-like. It's an image problem. And though now some really good games are available for the PC, it has missed out on quite a lot.

What this machine needed was a Pac-Man.

Well AtariSoft was savvy enough to sense this, and now the PC has its very own bona fide version of the arcade classic, complete with trademark graphics and sound effects. The advent of a real *Pac-Man* for the IBM may have been quite late, but it has done much to perk the old boy up.



Pac-Man.

Certainly it is true that the Pac-Man craze has subsided, in favor of more sophisticated games. It is also true that other micros sport better versions of the game. But at least PC owners can now put aside *Lotus 1-2-3* and *Visi-On* for a little interaction with Inky and Blinky.

It has been worth the wait. The IBM version is highly playable and looks, sounds, and feels much like its arcade namesake. IBM owners should have an affinity for maze games, and *Pac-Man* is the king of the maze games.

SOFTWARE PROFILE — BRONZE

Name: Pac-Man
Type: Arcade game
System: IBM PC, PCjr
Format: Disk
Language: Machine
Summary: The classic game, finally available for the PC.
Price: $34.95
Manufacturer:
AtariSoft
P.O. Box 61657
Sunnyvale, CA 94088
(408) 745-2000

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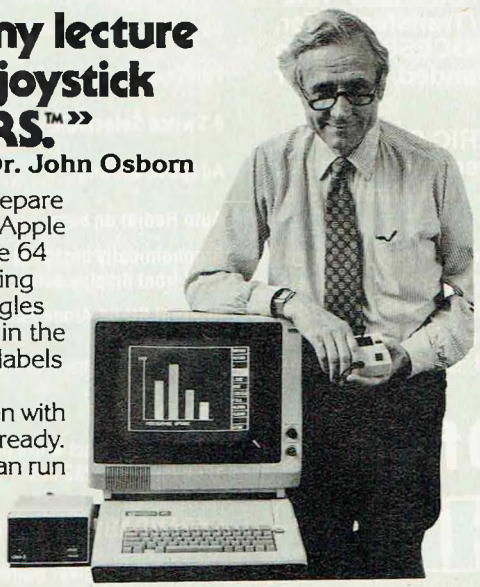

It was easy for Dr. Osborn to prepare for his lecture. He sat down at his Apple (it could have been a Commodore 64 too) and drew with the joystick using elastic lines and automatic rectangles and circles. Presto. Then he filled in the colors. Zip. Zip. Next, he typed in labels with Flying Colors Alpha Mode.

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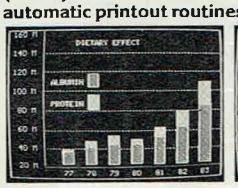

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Magnetic Harvest

Gnosis VII. Esoteric challenge combines the best features of a fantasy-based text adventure, a dynamic board game, and a complex, ever-renewable logic puzzle. Unique mental landscape for true adepts, alchemists, savants and saints. Apple & compatibles, Franklin, Basis 108. $19.95.

Mark Data Products

Astro Blast. Wave after wave of alien attackers—each one different and unique. A great shoot-'em-up with hi-res graphics, lots of color, and dramatic sound. TRS-80 Color Computer. $24.95 cassette; $27.95 disk.

Black Sanctum. For those who enjoy suspense. You encounter the forces of black magic as you roam around an old 18th century monastery. Watch out for the black-hooded figures. TRS-80 Color Computer. $24.95 cassette; $27.95 disk.

Bumpers. Tension mounts as you race through a randomly generated maze made more challenging by walls that are invisible until you bump into them. Each dead end has a hidden booby trap, so proceed cautiously. TRS-80 Color Computer. $24.95 cassette; $27.95 disk.

Calixto Island. A challenging puzzle with an occasional twist of humor. Visit a secret laboratory and a Mayan pyramid, and meet crazy Trader Jack, who adds to the fun. Classic adventure tale. TRS-80 Color Computer. $24.95 cassette; $27.95 disk.

Cave Hunter. Maneuver your way to the bottom of a spooky old cave to retrieve the treasures. Fun but not easy. Passages lead in all directions and angry cave creatures pursue you relentlessly. TRS-80 Color Computer. $24.95 cassette; $27.95 disk.

Cosmic Clones. Clonial Warrors, superklones, double bombs and "the death layer" relentlessly challenge the most skillful player in this unique, fast action arcade/action game. TRS-80 Color Computer. $24.95 cassette; $27.95 disk.

El Bandito. El Bandito must be a crafty little hombre to stay alive as he loots the local countryside. Escape into a tunnel to avoid that angry spider . . . race around the corner toward your lair. TRS-80 Color Computer. $24.95 cassette; $27.95 disk.

Glaxxons. Pit your playing skill against squadrons of swooping, diving space craft. Seven selectable skill levels and automatic game acceleration to blister your joystick finger. TRS-80 Color Computer. $24.95 cassette; $27.95 disk.

Haywire. Challenging combination of angry robots and the evil menace that provides many hours of fun and excitement. A classic arcade type game with lots of color and sound. TRS-80 Color Computer. $24.95 cassette; $27.95 disk.

Sea Quest. Get your shark repellent and scuba tanks ready. Much of the action in this unique treasure hunt takes place under sea. TRS-80 Color Computer. $24.95 cassette; $27.95 disk.

Shenanigans. An exciting pictorial search for the elusive pot of gold at the end of the rainbow. Hi-res graphics enhance this adventure. TRS-80 Color Computer. $24.95 cassette; $27.95 disk.

Space Raiders. An invaders-type game. Great sounds and tense action. TRS-80 Color Computer. $24.95 cassette; $27.95 disk.

Time Fighter. Arcade game using high-res graphics. Your mission is to destroy the dreaded Time Guardian who threatens the natural order of the universe. TRS-80 Color Computer. $24.95 cassette; $27.95 disk.

Tut's Tomb. Guide your intrepid adventurer through the ancient, mystical tomb of the great Pharaoh. Find the magical keys that lead to treasures as you outmaneuver the creatures that slither about you. TRS-80 Color Computer. $24.95 cassette; $27.95 disk.

Matrix Software, Inc.

Astrological Chart Package. Calculates horoscopes for any place on the globe in the 20th century. Detailed on-screen chart display, filekeeping and "aspectscope" feature. Hard working program for serious astrologers. Apple, C-64, Pet, TRS-80 Model I, III. $150.

Astrological Chart Service. Automated chart service with sophisticated filekeeping for the professional astrologer. The foundation of an efficient and profitable service business. Highest quality chart output. Apple, C-64, Pet, IBM PC, TRS-80 Model I, III. $300.

Astrological Horoscope Interpreter. Produces 12-page horoscope interpretations for the professional astrologer to retail to clients. Quality text by acknowledged expert authors. Easy-to-read chapter format output. Apple, C-64, Pet, TRS-80 Model I, III. $500.

Astro*Talk. Creates the same personal horoscope used by professional astrologers, then provides detailed interpretation. High accuracy, user-friendly. Apple, C-64, Pet, IBM PC & PCjr. $39.95.

Microcomputer Games

Computer Title Bout. A game of professional boxing, allowing you to re-create or create all the great match-ups of past, present, and future, from hard-hitting heavyweights to feisty featherweights. Atari. $30.

Dreadnoughts. Re-create all of the major naval action in the North Atlantic during the early years of WWII. Major warships from Britain, America, France, and Germany are represented. Apple disk. $30.

Gulf Strike. Examine a critical flash point, the Persan Gulf. This is a brigade-level simulation pitting Iran and the U.S.A. vs. Iraq and the U.S.S.R., on a complete scrolling map. Atari disk. $25.

Jupiter Mission 1999. A highly detailed role-playing space adventure game that includes challenging arcade segments and mystifying puzzles. Four separate programs are enclosed to test the creative imagination of the advanced gamer. Atari disk. $50.

Panzer-Jagd. A game of armored combat on the Eastern front of WWII. You command an assault force consisting of 25 armored and infantry units with artillery support. Atari, C-64. $25 cassette; $30 disk.

Space Cowboy. A fast action arcade game. You must run on the gauntlet lined with robot lasers and pitfalls. Displayed on the screen are stamina, speed, and sections of

Jericho by shooting blasts on Joshua's ram's horn while dodging the enemy's arrows. Arrows fly faster the longer play continues. Apple, Atari. $29.95.

The Lion's Share. Adventure game based on biblical Book of Daniel. Player must crack his way into ancient Babylon, signal Persians of attack. Dangers include fiery furnace, poisonous snakes. Features music, animation, sound. Apple. $34.95.

The Philistine Ploy. Adventure game based on biblical Book of Judges. Player is wandering Israelite in search of legendary treasure while evading a Philistine warrior who is after his life. Features music, animation, sound. Apple. $34.95.

Samson And Delilah. You are Samson, imprisoned in the Temple of the Philistines, who must fight your way to the foundation pillars to topple the prison. Must evade Temple Guards, Delilah and her fiery scissors, and a hungry lion. Apple, C-64. $24.95.

Decillionix

DX-1 Echo. Software for real time audio processing, echoing, and reverb. More than 40 key-selectable routines are provided with control over various parameters such as digitizing rate, echo loop length, and echo loop start and end locations. Apple. $149.

DX-1 Sound Processing System. Hardware/software package for digitally sampling, processing, and playing back ordinary sound. Includes programmability as well as preset routines. Includes 22 prerecorded sounds. Apple. $239.

DX-1 Volumes 2-5. Four volumes of prerecorded sounds ranging from "music" to "miscellaneous" with 18 to 24 sounds per disk. Includes a guide. Apple. $79.

Dilithium Press

Golden Flutes and Great Escapes: How to Write Your Own Adventure Games. Teaches you how to create your own games. Describes the process of designing programs; gives you four complete game programs with explanations. TRS-80 Model 4, Apple, C-64. $29.95.

Gamestar, Inc.

Baja Buggies. Provides full racing excitement with 3-D perspective, scrolling background, and exhilarating dune buggies. Arcade-like high-score/initials scoreboard. Atari. $31.95.

On Court Tennis. Full racquet control with drop shots, smashes, ground strokes, lobs, hard and soft serves. Chooses your playing surface and skill level. Solitaire or human opponent. Player perspective graphics. Atari, C-64. $31.95.

On Field Football. Player perspective graphics create "on field" realism. Incredible gridiron action from pass catching and fumbles to penalties and cheer of the crowd. College and pro level teams. Atari, C-64. $31.95.

Star League Baseball. Lifelike animation in a sports game, from the wind-up and delivery of the pitcher to the arc (and shadow) of a fly ball. Relief pitchers available when your starter tires. Atari, C-64, Apple. $31.95.

Starbowl Football. Realistic gridiron action from pass catching and fumbles to penalties. Lifelike, animated players. Atari. $31.95.

Generic Software

Castle-Gor. Fantasy-adventure game. Fight creatures, collect treasures in castle dungeons. 400 rooms; no two games alike. Includes user's dungeon manual and a gift certificate if you escape with all the treasures. CP/M: $24.95; MS-DOS: $29.95.

Football. One to two player game; play offense against computer-defense. Run, punt, pass, or kick field goal; fans cheer. Keeps time, score, ball position, yard-to-go, quarters. Halftime show, too. Nine skill levels. CP/M: $24.95; MS-DOS: $24.95.

I-Bert. Game similar to arcade version but tailored for the IBM PC. You escape creatures by jumping to color tiles. Game becomes harder as game progresses. High score saved to disk. MS-DOS. $29.95.

Space-Warrior. Capture the galaxy; arcade-style game. Fight enemies with force field. Your enemies move faster as you capture more space. Different levels of play. Key-controlled movement. High score saved to disk. CP/M. $19.95.

Instant Software, Inc.

Air Flight Simulation. This simulation reproduces all the basic flying characteristics of a light aircraft. Do your crashing now—before you try the real thing. TRS-80 Model I, III. $14.95.

Airmail Pilot. Fly the Jenny, an open cockpit biplane, from Columbus to Chicago. You need only avoid running out of gas, being struck by lightning, crashing in a down draft . . . all before the deadline. TI. $14.95.

Jet Fighter Pilot. Takes you as close to real combat as possible without pulling G's. Offers you many commands in a flight simulation. Apple. $24.95.

Mountain Pilot. If you can bring supplies to the desperate miners of Goldtown, you will be paid well. Your return trip with the gold bullion is the real payload, though. TRS-80 Color Computer. $19.95.

Night Flight. This program lets you take off, land, and fly in a simulation so real we have included the basic principles in the instructions. Apple. $24.95.

Santa Paravia And Fiumaccio. A classic strategy game that teaches modern economics in a medieval setting. TRS-80, TRS-80 Color Computer, TI: $14.95; Apple: $24.95.

Space Shuttle. Puts you in the command pilot chair on America's first reusable space vehicle. Close to the ultimate flight. TRS-80 Model I, III. $19.95.

JW Software

Cosmic Cruise. Travel through space while avoiding planets, asteroids, and attacking aliens. Capture rebel outposts to refuel and rearm. The console of your saucer warns you of impending danger. TI 99/4A. $8.95.

Run the Rapids. Navigate your rubber raft through winding, white-water rivers. Avoid protruding rocks, dangerous fish, and drifting logs. Grab floating treasures to score points. TI 99/4A. $8.95.

Shuttle Commander. Experience the excitement of being the captain of the NASA Shuttle. Your monitor becomes the Shuttle control panel and with it, you control the majestic spacecraft. For ages 6 and up. TI 99/4A. $8.95.

Submarine Warrior. A two-player arcade game. Pilot submarines through enemy waters, diving and surfacing to avoid mines, whales, and depth charges. Fire your missiles at attacking planes and boats. TI 99/4A. $8.95.

the firepower of your remotely fired, trigger-action missiles. You are doomed to be pestered forever unless you drive these waves of AE ("rays") away. Apple, Atari, Vic 20. $34.95.

Apple Panic. The apples will get you if you don't watch out. Forced to flee from pursuing apples in a multi-level mansion, you set traps for your pursuers along the way. A fast arcade-style game with great graphics and animation. Apple, Atari, IBM PC & PCjr. $29.95.

The Arcade Machine. Create your own arcade game. No programming knowledge needed. Comes with a selection of full color monsters (or you design your own), dramatic explosions and sound effects, automatic high scoring features, and more. Apple, Atari. $59.95.

Choplifter!. With realistic throttle action you maneuver a daredevil rescue chopper. You fight off enemy jet fighters and air mines above, and tank fire and air-to-ground missiles below, to rescue hostages and bring them out alive. Apple: $34.95; Atari disk: $34.95, cartridge: $44.95; C-64 disk: $34.95, cartridge: $39.95.

David's Midnight Magic. Hi-res pinball at its best. Dual flipper controls, upper and lower playing levels, tilt mechanism, rollovers, multiple ball play, electromagnetic deflectors and many special effects. Apple, Atari, C-64. $34.95.

Gumball. A colorful game with uniquely detailed graphics and twists of play, requires adept hand/eye coordination and concentration. Apple, Atari. $29.95.

Labyrinth. Descend into the labyrinthian depths of Prince Julian's long abandoned diamond mines in search of treasure and encounter creatures guarding corridors with walls that move constantly to expose entry ways and seal off exits. Apple, Atari. $29.95.

Lode Runner. More than a fast-action arcade game with 150 levels of play, it is also a game generator that lets the user create innumerable screens that can be saved to disk for future play. Apple, Atari, IBM PC, Vic 20: $34.95; C-64 disk: $34.95; cartridge: $39.95.

Martian Raider. Streaking through space, you guide your intergalactic battle ships, skimming perilously close to the surface to devastate Martian cities and destroy ammunition dumps, while warding off ground-to-air missiles, UFOs, and meteorites. Vic 20. $19.95.

Mask Of The Sun. An adventure game in which you assume the role of an archaeologist adventurer searching for a lost artifact that could save his life. Atari, C-64. $39.95.

Matchboxes. A parlor game the whole family will love; challenges the intuition and memory whether playing a human opponent or the computer. Atari, C-64. $29.95.

Multisound Synthesizer. Compose your own kind of music, create your own special song! Flexible, it can be played in many ways to make merry melodies and special effects. Fascinating and fun. Vic 20. $19.95.

Operation Whirlwind. World War II strategy game where your ability to command, give orders and move troops skillfully determines your success. First class graphics and sound effects, four levels of difficulty, great for the thinking game player. Atari, C-64. $39.95.

Seafox. In a lone submarine you take on a convoy of enemy ships and its escort, while dodging exploding depth charges, mines and torpedoes. You will need superior maneuvering ability, courage, and a welcome aquatic ally to survive. Apple, Atari: $29.95; Atari cartridge: $39.95; C-64: $39.95; Vic 20: $34.95.

Serpentine. Giant serpents set forth to slay their slithery cousins. To add to the fun, the snakes lay eggs and fight ferociously to protect their young. A fast arcade style game with many levels of play. Apple, Atari, IBM PC: $34.95; C-64: $39.95; Atari cartridge: $39.95.

Shark Trap. Pirates have thrown you overboard into dark, shark-infested waters. Your only protection is an atomic net which you trail behind you, trying to snare the sharks while keeping an eye out for the ever-increasing deadly octopi. Vic 20. $19.95.

Sky Blazer. Attack and evade supersonic tanks, heat-seeking missiles, explosive balloons, enemy jets and fuel guzzling bluebirds in your maneuverable fighter, as you battle to clear away the Flatlanders' radar, ICBM installations, headquarters. Apple, Atari: $31.95; Vic 20: $34.95.

Spare Change. A game that combines all the elements of a winner—excellent graphics, great sound, and unusual play action with surprises and humor. Apple, Atari, C-64. $34.95.

Comm*Data Computer House, Inc.

Circus. A British graphic adventure about the strange events in a seemingly desolate circus. Well written mystery, spiced with humor. C-64, disk only. $27.95.

Perseus & Andromeda. You are Perseus, son of Zeus and Danea. To protect your mother's life, you must do the King's bidding. Explore strange lands to find Medusa the Gorgon and bring back her head. Graphic adventure. C-64, disk only. $27.95.

Ten Little Indians. Ten figurines seem to hold the answer to where the Major's gold is hidden. This is a British graphic mystery adventure written by Brian Howarth, who is well known for his colorful graphics and wit. C-64, disk only. $27.95.

The Wizard Of Akyrz. At the royal palace the King beseeches you to rescue his daughter from the evil Wizard. If you succeed, your reward will be priceless, but if you don't . . . A British graphic mystery adventure. C-64, disk only. $27.95.

Computer Easy Inc.

Novatron Trilogy. Attack anything that moves. You get Construction, Gridwalker, and Mazerace. All offer fast action, sound, or silent play. Fast animated graphics. IBM PC & PCjr. $19.95.

Shultz's Treasurer. An alert mind and razor sharp relexes are what you need to search for the Lost Dutchman's Gold Mine. With devices provided you can fight off enemies and search for the mother lode. IBM PC & PCjr. $19.95.

Super Novatron. Age isn't important when it comes to the instant strategy and precision control needed to win a round of fun. If you are fast enough and think instinctively, you control your wall and win. IBM PC & IBM PCjr. $19.95.

Davka Corporation

Fuzzball. Arcade-style game where player chases Fuzzballs with vacuum cleaner. Features changing floor plan mazes, accelerating playing speed, sound. Garbage can explodes if not emptied within a short time once it is full. C-64 disk. $24.95.

Jericho. Arcade-style game in which player blows down the walls of ancient

Directory of Personal Computer Software

The program descriptions listed in this section of the Directory were provided by the manufacturers of the programs. The presence of a program in this Directory does not imply an endorsement of the program or the description by the editors of The Software Buyer's Guide. Check regular issues of Creative Computing for in-depth evaluations of many of the programs listed here.

Recreation

Academy Software

IFR (Flight Simulator). Accurately simulates instrument flight in a light aircraft. All instruments necessary for instrument flight are displayed on the screen. Includes: full aircraft features, stalls/spins and has realistic specifications. Vic 20: $39.95 (cartridge); C-64: $29.95 (tape or disk).

Addison-Wesley Publishing Company, Inc.

Dr. C Wacko's Miracle Guide To Designing And Programming Your Own Atari Computer Arcade Games. This new book/software package explains the arcane mysteries of developing, designing, and programming real arcade games in Basic on any Atari computer. Atari, one disk drive. $24.95.

Rhiannon Games for Girls. Four non-violent, adventure games, Jenny Of The Prairie, Chelsea Of The South Sea Islands, Cave Girl Clair, and Lauren Of The 25th Century, that are the first computer games created especially for girls. Apple. $39.95.

Alkazar Associates

Game Master. For role-playing gamers: a utility with sophisticated dice rolling, bookkeeping, and chart rolling. Reduces drudgery of playing complicated games while enhancing the imaginative portions of the game. IBM PC, XT & PCjr, Apple, Atari. $24.95.

Stellar Defender. An arcade-type game for monochrome or color monitor. Alien fleets of increasing "intelligence" must be fended off before they overrun the player's home base. A fast-action game. IBM PC, XT & PCjr. $14.95.

Alpha Software Corporation

Question. Plays "20 Questions." Also allows the user to add categories, questions, and answers. IBM PC, XT & compatibles. $45.

Artworx Software

Alley-Oops. Diabolical beer bottles, evil pin sweeps, vicious gum spots and vengeful bowling shoes are your opponents in this unique arcade game. C-64. $29.95.

Bridge 4.0. The upgraded *Bridge 4.0* allows you to bid for the contract and play out the hand. You and your computer partner play against two computer opponents, and either partnership can take the bid. Has improved bidding and the ability to replay and "rotate" interesting hands. C-64, Vic 20, Atari, Apple. $24.95.

Compubridge. The ideal program for anyone who wants to improve his bridge game or for someone who has never played bridge before. Based on a popular Barclay bridge text and consists of tutorials and computer generated quizzes. C-64, Atari, Apple. $29.95.

Data Disk 1 Female. Data disk 1 provides two additional female opponents for the *Strip Poker* program. C-64, Atari, Apple. $24.95.

Data Disk 2 Male. Data disk 2 introduces two male opponents to the *Strip Poker* game system. C-64, Atari, Apple. $24.95.

Gwendolyn. Kidnapped in revenge and imprisoned somewhere deep beneath your castle is your princess, Gwendolyn. The prosperity of your kingdom and the end of a bitter feud depend upon your finding her. Atari, C-64. $27.95.

Hazard Run. The sheriff has spotted you and you must make the treacherous run through Crooked Canyon past Bryan's Pond to the jump at Hazard Creek. Atari. $24.95.

Poker Tourney. A simulation of Draw Poker as it is played in the poker clubs of Gardenia, CA. You are entered in a high stakes tournament facing six opponents. Each has his own style of playing and of bluffing. Atari, Apple. $24.95.

Strip Poker. Settle in for a sizzling evening of Strip Poker. Terrific fun at parties. C-64, Atari, Apple. $34.95.

Vaults of Zurich. Zurich, the banking capital of the world, has vast wealth in its famed unimpregnable vaults. But you, as a master thief, have dared to undertake the boldest heist of the century, to steal the most treasured possession of all: The Opec Oil Deeds. C-64, Vic 20, Atari, Apple. $24.95.

Blue Sky Software, Inc.

Silly 64. Scandalous, improper, hilarious, devious. Shamelessly exploits the power of your C-64, with the belief that you and your computer have the right to be silly. C-64. $24.95.

Broderbund Software

A.E. Menacing sting ray squadrons streak down from the sky to attack you, eluding

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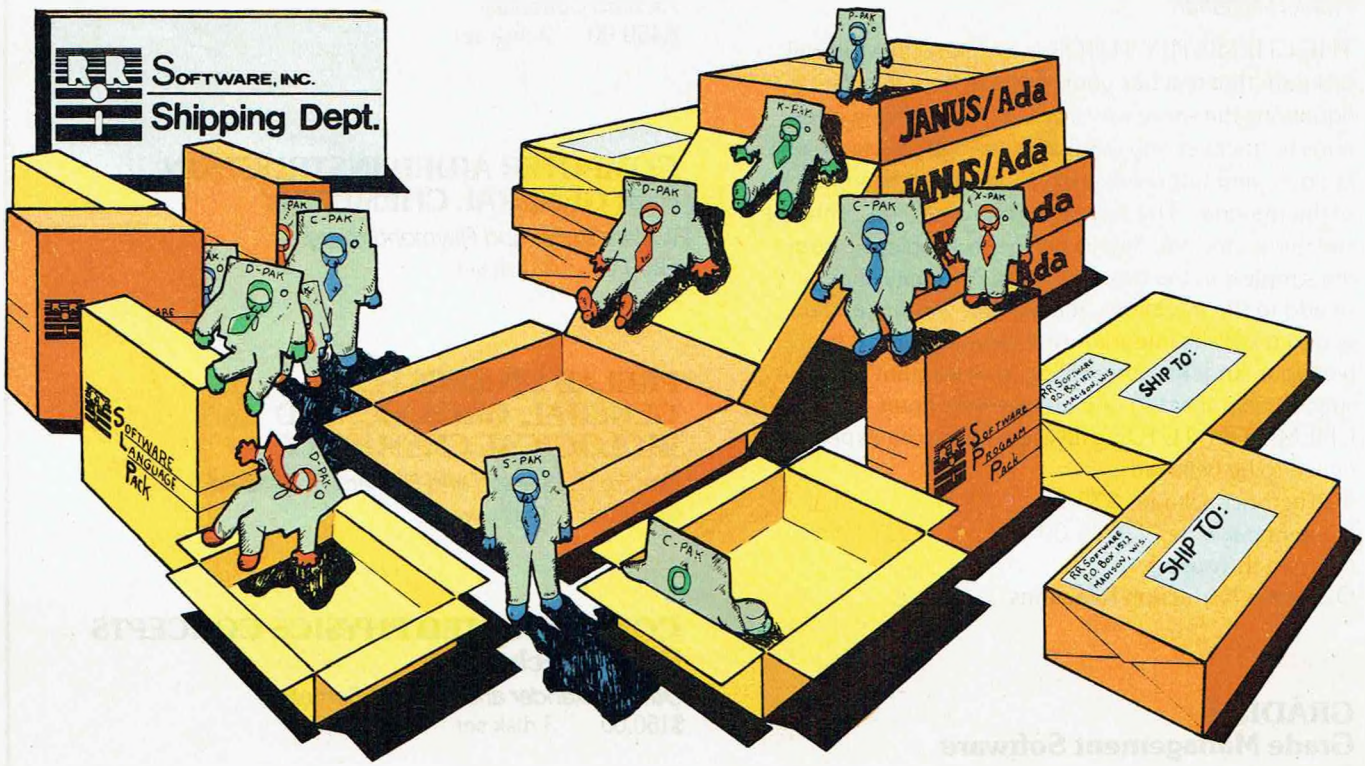

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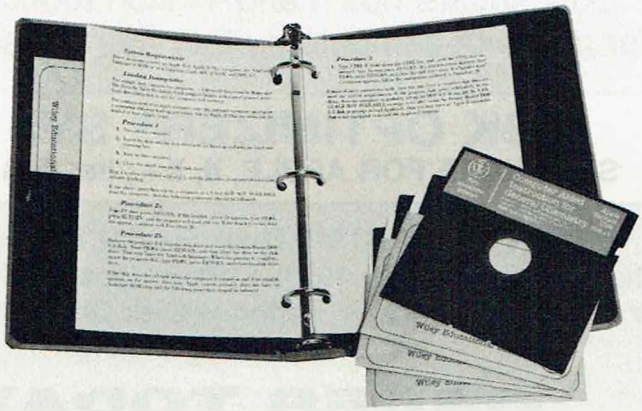

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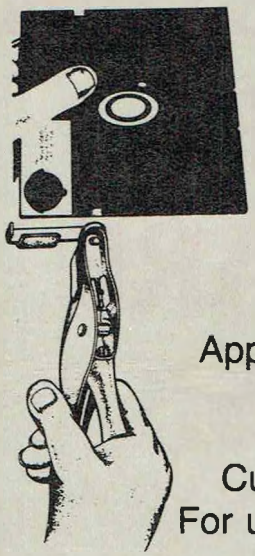

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Award Winners

Infocom Sweeps Text Adventure Category

We gave a lot of thought to awarding medals in the category of text adventure. A viable category, with respectable entries and respectable adherents. It seemed a natural thing to do, except for one interesting fact—all three medals would without question end up going to one company.

Not to imply that this in itself would in any way influence our decision vis à vis a text adventure medal category, mind you. If the U.S. can sweep in a few competitions in the real Olympics, that will be fine with us. The problem was that while we were unanimous in our praise for Infocom, acknowledged master creators of the text adventure, we could not achieve a clear decision as to which package should win which award. Infocom was simply too good—they screwed up our system. Some among us felt a strong desire to give them more than three medals. But how can you give more than three medals without running out of metals?

The situation tested our mettle.

Hence a compromise. We will award no medals formally in this category; however, we shall present Infocom with a plaque made of inlaid gold and silver on a bronze pedestal. We dare not pick one Infocom package over another. However we will allow the best of them to take a victory lap around the track, and give you a wave.

Enchanter casts you as a rookie wizard bent on deposing the foul and beastly warlock terrorizing the countryside. You have a beginner's book of spells, a mysterious scroll, and not much more than a lot of enthusiasm with which to complete your quest. If fantasy is your kind of game, *Enchanter*, along with the now classic *Zork* series of adventures, are the names to remember.

John Anderson

Infidel welcomes you to the sunny Sahara, where your archaeological expedition has deteriorated into a sandy fracas. Your bearers are getting surly, needed equipment has failed to arrive, and you're feeling slightly delerious. Maybe you shouldn't have intercepted the phone call to the real archaelogist and set out with no experience. Will you find your way to the pyramid and the possible riches that await you? Or will you end up running home to mummy?

Planetfall has the best sense of humor of any text adventure we have ever looked at and has an extremely original plot line. The mystery of this one is enhanced by the fact that the adventurer is not quite sure just *what* the objective of the game is. Intergalactic postcards packed with the game dare you to mail them out.

Starcross leaves you floating in the depths of space without even a pod to pass in. If you are lucky, you may find your way into a derelict space station the size of an asteroid. Make some repairs to the ship or perish. Live, and treasures await you—perhaps something even greater than material riches. And remember, when in Wease, do as the weasels do.

Suspended gives you the dubious honor of serving as the "central mentality" of Contra, a planet with some real problems. Using six rather moody robots, your job is to repair the damage done by your predecessor, which has all but doomed the planet. *Suspended* is the only Infocom adventure that comes with its own game board and pieces, so you may keep track of your droids at all times. A tough game, but a rewarding one.

Witness gets you to feeling as if you have been dropped right into a Raymond Chandler movie from the mid 1940's. Phong the butler knows more than he's letting on, and Monica is a desperate woman. Did Linder's wife feign suicide, then murder him? Perhaps that matchbook with a scribbled phone number on the inside cover you found on the lawn holds the key to an answer.

See what we were up against? Get them all, and decide for yourself which gets the platinum medal, and which gold, silver, bronze, magnesium, and aluminum. END

team waves in addition to the normal wave in which you must simply defeat all of the enemy buzzards the computer throws your way.

The beautiful hi-res graphics and animation of *Buzzard Bait*, combined with exciting sound effects, have even the most skeptical critics convinced that anything that can be done on other home computers can be done as well, or better, on the TRS-80 Color Computer. Not only is *Buzzard Bait* an excellent game in its own right, it deserves an A for being faithful to its inspiration, Williams' arcade game Joust.

Sands of Egypt

In the beginning there were the epic text-oriented adventures such as *Zork* and of course, the original adventure, the Colossal Cave. Though vividly descriptive, these classics seemed to be missing something, and it wasn't long until On-line Systems introduced its popular series of computer adventures with graphics. With the introduction of *Sands of Egypt* for the TRS-80 Color Computer, adventure games evolved a step further. Even fans of the Infocom text-oriented adventures must admit that the animated color graphic displays found in *Sands of Egypt* are superlative and add a new dimension to adventure gaming.

SOFTWARE PROFILE

BRONZE

Name: The Sands of Egypt

Type: Animated adventure

System: 16K TRS-80 Color Computer with Extended Color Basic

Format: Disk

Language: Machine language.

Summary: One of the finest adventures available for the Color Computer.

Price: $29.95

Manufacturer:
Radio Shack
1800 One Tandy Center
Fort Worth, TX 76102

It has been said that a picture is worth a thousand words—*Sands of Egypt* is testimony to that. Immediately after booting the disk you realize that this is no ordinary adventure game. The top portion of the screen is devoted to an animated display of your current location. As you contemplate your next move, you can watch the billowing clouds drift aimlessly above the sand dunes in the background. If any objects or artifacts are present, they are depicted on the screen in full-color hi-res graphics. No longer are adventure fans forced to read exhaustive descriptions of fantasy locations, all you have to do is open your eyes to visit the distant lands of Egypt and become involved in her mysterious secrets.

As adventures go, *Sands of Egypt* is challenging, but it lacks some of the subtleties found in the fine line of text-oriented adventures from Infocom, the recognized leader in the field. *Sands of Egypt* is complex enough to capture the interest of dedicated adventure fans, yet not too difficult to discourage novices. Without a doubt, *Sands of Egypt* is the most exciting advancement in the genre of computer adventures since the inception of the games themselves. ■

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Authors: Fred Preston & Bob McCormick
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Authors: John Hollis & Steve Hickman
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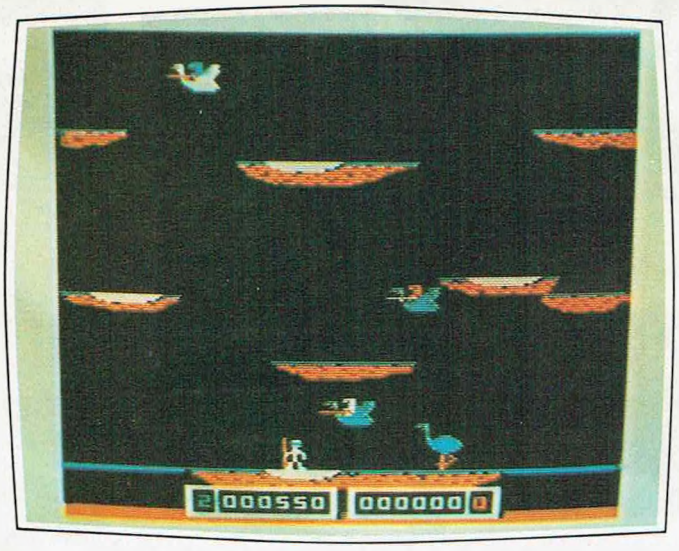

Buzzard Bait

Sands of Egypt

better than using the Radio Shack joysticks. The Tandy sticks seem to have large dead zones which make delicate maneuvers difficult to perform. As always, this is a personal preference and you should experiment to determine which type of stick you feel most comfortable using.

The thing that sets *Zaxxon* apart from all other arcade games is the unique three-dimensional view of the action. The innovative graphics are the selling point of both the coin-op and computer versions of Zaxxon. I didn't think that it was possible, but the masters at DataSoft have made the Color Computer adaptation one of the best versions of Zaxxon for any computer or home game system. There is only one way to describe the graphics of *Zaxxon*: absolutely superlative.

As your fighter gracefully glides into the first fortress, the enemy bunkers come to life. Shooting rockets at your ship, these red pillboxes present problems if you remain close to the battlefield. The stationary enemy planes on the ground also fire at you. Use the gauge on the left side of your screen, as well as the shadow of your plane, to judge your altitude. Beware of the small black holes scattered along the surface; these are the openings of missile silos. The large circular tanks located in the fortress contain valuable fuel and shooting them replenishes your supply. All of these objects can be destroyed with a single shot, but you must avoid colliding with them. Also found in the fortress are radar dishes and force fields. The dishes are to be blown up, but you must either carefully sneak under or climb over the force fields. After weaving your way through the first fortress, you enter space.

In outer space, you must dispose of a series of enemy fighter planes. If you destroy a complete squadron (20 planes) before the second fortress appears, you earn bonus points. As you wrestle with the joystick, the planes diminish in size as they retreat into the distance and grow as they make daring attacks. After a predetermined length of time, the second fortress scrolls into view. This floating battlefield is much like the first, except that the enemy robot resides at the far end of this one. To destroy the robot, you must manage six direct hits on its homing missile. Otherwise the missile is launched with you as its target!

While the graphics are what really make this game excellent, the fine sound effects should not be overlooked. It may be true that "in space no one can hear you scream," but they certainly can hear you explode. Whenever you lose a ship, you hear a dynamic blast from the speaker. The other sound effects, such as surface explosions and the firing of your rockets, seem deliberately muffled.

If you are fairly good at the coin-op game, the Color Computer version of Zaxxon may prove somewhat easy. Those who are familiar with it should be happy to note that many of the editors here have commented that the Color Computer adaptation looks and plays better than the ColecoVision *Zaxxon*. Steve Bjork, the person who programmed the Color Computer version is in an awkward position: what can he do for an encore?

One thing that may keep *Zaxxon* out of your reach is its rather lofty price tag. If $39.95 seems like a great deal of money, just think how much the licensing agreement must have cost. Unless you make it worth their while by buying the products, Color Computer software companies will probably not continue to produce standard-setting games such as *Zaxxon*.

Buzzard Bait

Even though Atarisoft has in its wisdom decided to produce adaptations of popular coin-op games for almost every home computer except the TRS-80 Color Computer, there is no need to despair. Third-party software manufacturers have been, and will continue to crank out excellent arcade games for Radio Shack's machine. One of the finest companies around is Tom Mix Software (yes, the president is actually named Tom Mix), and one of their best games is *Buzzard Bait*, a version of Joust.

SOFTWARE PROFILE — SILVER

Name: Buzzard Bait
Type: Arcade game
System: TRS-80 Color Computer
Format: Disk or tape
Language: Assembly
Summary: High flying action.
Price: $30.95 disk; $27.95 tape
Manufacturer:
Tom Mix Software
4285 Bradford N.E.
Grand Rapids, MI 49506
(616) 957-0444

The object of *Buzzard Bait* is to use the joystick to fly your mount around the screen and unseat the enemy players who ride atop buzzards. To unseat an opponent, you must be above him when the two of you collide. Once you kill an enemy rider, it turns into an egg which drops down to the ground and, if you don't pick it up soon enough, hatches into a more skilled enemy rider.

Buzzard Bait is a two-player game that contains all of the different waves and opponents found in the arcade original, Joust. There are the egg, survival, gladiator, and

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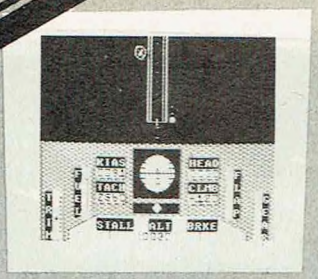

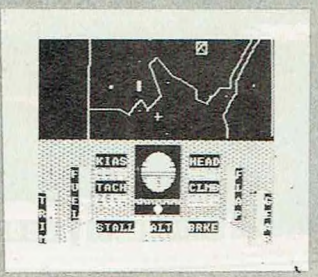

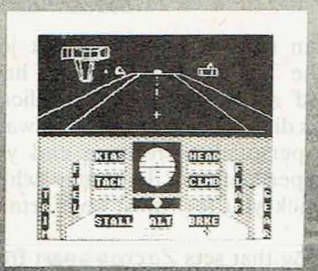

WORLDS OF FLIGHT (WOF) is a "view" oriented flight simulation for the TRS-80 Color Computer, written entirely in Machine Language. "View" oriented means that the pilot may determine his or her position by actually viewing the surrounding landmarks as opposed to using instruments which sense navigational references. This is a major departure from "instrument only" simulations which can be achieved through BASIC programs. Most instrument maneuvers and procedures may be practiced. The craft is a light-weight, single-engine airplane with low wings. A nose wheel which is both steerable and retractable is also modeled. Some aerobatics are possible including sustained inverted flight, aileron rolls, spins and stalls.

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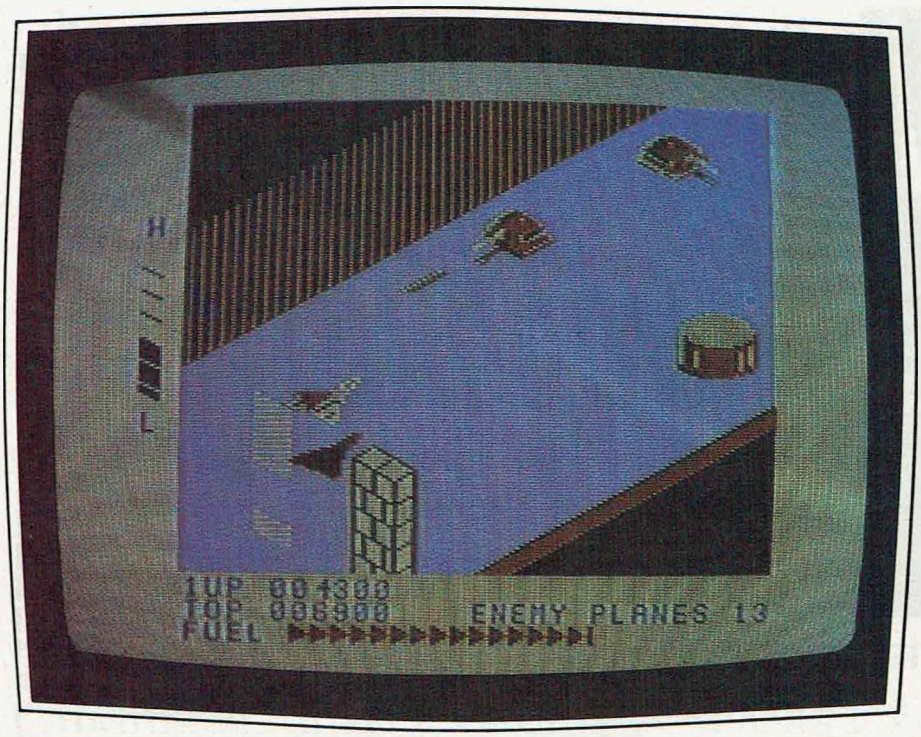
Zaxxon

It was early in the morning when the postman arrived here at our Morris Plains editorial office. While looking through my mail, I noticed a small cardboard box from DataSoft. After casually peeling off the masking tape and opening the package, I discovered a copy of *Zaxxon* for the Color Computer. Little did I realize that within this unassuming box was a product of such quality and excitement that the better part of an entire day would be devoted to playing the game.

Until recently, the licensing of coin-op video games has been very limited in the computer field. We are just beginning to see some of the major software houses buying up the rights to produce home versions of the popular arcade games. *Zaxxon*, from DataSoft, is a member of this new breed of computer games.

The object of *Zaxxon* is to shoot and destroy a powerful enemy robot. To meet this robot, you must first pilot your fighter plane through a floating space fortress, battle up to 20 enemy jets in outer space, and then survive a flight through yet another fortress bristling with missile silos and enemy bunkers. It is no easy task.

Zaxxon is designed for one or two people to play one at a time. Each player must use a separate joystick; a keyboard option is not offered. Pushing the stick forward causes your plane to dive rapidly, and pulling back makes the fighter climb. Many players feel that these "reverse" controls are strange, but that is exactly how most real airplanes react to the movement of a flight control stick. I find that playing with an Atari-style stick is much



Zaxxon

SOFTWARE PROFILE GOLD

Name: Zaxxon

Author: Steve Bjork

Type: Arcade

System: 32K TRS-80 Color Computer, Apple, Atari

Format: Tape/disk

Language: Assembly

Summary: The best, and only, licensed Zaxxon for the Color Computer

Price: $39.95

Manufacturer:
DataSoft Inc.
19808 Nordhoff Pl.
Chatsworth, CA 91311

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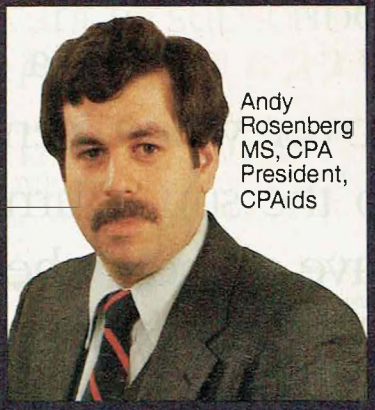

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Dino Eggs. When you leaped back in time to the Mesozoic Era, you accidentally brought along a case of the measles. You have dedicated yourself to saving the dinosaurs and warping them back into the 20th century. Apple, IBM, Atari, C-64, ColecoVision. $40 to $50.

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The Heist. Your mission is to infiltrate a museum that is actually a front for a criminal organization and find the hidden microfilm. Maneuver carefully through 96 different rooms fiendishly booby trapped with dangers. Apple, IBM, Atari, C-64, ColecoVision. $35 to $45.

HighRise. Arcade-type game develops planning skills, logic, eye-hand coordination and shape perception. Select blocks of various shapes and sizes and load them on a springboard. Build a balanced tower or the wall will come crashing down. Apple, IBM, Atari, C-64. $30.

Miner 2049er. Wild chase though 11 levels of traps, tricks, and lethal challenges. Ladders to climb, death-defying leaps; jump from moving platforms. At the end, shoot Bounty Bob out of a cannon. Apple, IBM, ColecoVision. $40 to $50.

Scraper Caper. Sequel to *Miner 2049er.* Bounty Bob makes his way into a towering inferno and must save whatever he is told to rescue. Super graphics and excitement. Apple, IBM, ColecoVision. $40 to $50.

Micromedia Software

Bumble Bytes Computer Greeting Cards. Birthday, friendship, thank you, or Christmas greeting story (personalized) with games, color graphics, and sound. Ideal low cost—high delight gift. Apple. $11.95.

MicroProse Software

F-15 Strike Eagle. Modern jet fighter simulation with the thrill of jet combat from the experienced fighter pilots of MicroProse. F-15 Strike Eagle features include 3-D graphics, F-15 maneuverability, airborne radar, computer-assisted targeting, air to air missiles, full aerobatics, takeoffs and landings, and multiple combat scenarios. C-64, Atari, Apple, IBM PC & PCjr. $34.95.

Floyd of the Jungle. Unique jungle foot racing game for multiple simultaneous players. The jungle players must race through the jungle avoiding the lions, tigers, and pygmies with poison darts, while trying to beat the other players to be the first to rescue the lovely Janice! C-64, Atari. $29.95.

HellCat Ace/Spitfire Ace. Air to air combat flying simulations. Out the cockpit view from either a HellCat F6F or a Royal Marine Spitfire with realistic 3-D graphics to fly loops, rolls, and all other combat fighter pilot aerobatics to shoot down the Axis fighters. C-64, Atari, Apple, IBM PC & PCjr. $29.95.

Mig Alley Ace. One-on-one split screen aerial combat simulation of jet fighter dogfighting. Out the cockpit 3-D graphics allow each pilot to maneuver to shoot down the other player pilot through the use of all combat flying aerobatic maneuvers including loops and rolls. Atari. $34.95.

NATO Commander. Full European continent scrolling, accelerated real-time wargame simulation that requires strategic thinking and arcade speed decisions to defend Europe. You must deploy and maneuver your battle units in real time to stop the Warsaw Pact invasion! C-64, Atari, Apple, IBM PC & PCjr. $34.95.

Solo Flight. User-friendly, challenging flight simulator. Joystick control, 3-D graphics, full cockpit instrumentation, dual VOR'S, ILS, 21 different airports, and challenge from unexpected emergencies including weather, instrument, and mechanical failures. C-64, Atari, Apple, IBM PC & PCjr. $34.95.

Wingman. Split screen, full scrolling, air to air, air to ground, flight leadership simulation that allows head to head battle between two flights of two aircraft each. Each pilot is required to loop, dive, and climb his aircraft, either to gain a good bombing run on enemy territory, or to close on enemy fighters. Atari. $34.95.

Microsparc, Inc.

Hallowe'en. All the spooks have come out to challenge your Wizard! Dangling spiders, ravenous jack-o'-lanterns, grinning skulls, and deadly choppers are in pursuit as you collect reward pumpkins. 64K Apple, Franklin Ace. $29.95.

Mission: Escape. Volcanic eruptions endanger the 12 planets of the Appel System and have catapulted asteroids and meteors into your orbit. Your piloting skills will save the Tweenies. 64K Apple, Franklin Ace. $29.95.

Northwest Software

Empire. The popular mainframe game is a strategy and tactics game available for the IBM PC by the original author, Walter Bright. Requires MS-DOS, 128K IBM PC & PCjr. $40.

Ojai Software

3-D Othello. Play Othello in 3-D against computer (four skill levels) or a friend. Vic 20, C-64. $15 cassette.

Omnitrend Software

Omnitrend's Universe. Adventure strategy game. Comes with an 82-page manual, loose-leaf binder, quick reference cards. This real-time game uses 3-D graphics and true planetary orbits. Atari, Apple IBM, Zenith. $89.95.

Parker Brothers

Astro Chase. Players save planet Earth from destruction by manning the spacecraft that can stop the alien enemy before it is too late. All formats: 1 player. Atari. Price depends on format.

Chess. Classic strategy game adapted for the home computer with skill levels for the beginner, the tournament player, and anyone in between. Endorsed by the International Chess Federation. Both formats: 1 player. Atari, IBM PC. Price depends on format.

Frogger. Players try to guide their frantic frogs to safety in a madcap dash across a busy highway and a rushing river. All formats: 1 or 2 players. Atari, C-64, Vic 20, TI 99/4A. Price depends on format.

Gyruss. Players must conquer planets and face unremitting waves of enemy ships to get from Neptune to the safe haven of Earth. All formats: 1 or 2 players. Atari, C-64. Price depends on format.

James Bond Agent 007. A real thriller with four missions, each depicting a different movie, as the legendary Bond thwarts the agents of S.M.E.R.S.H. with precision flying and cool-headed thinking. All formats: 1 or 2 players. Atari, C-64. Price depends on format.

Popeye. Players join Popeye as he races through a crazy houseboat in pursuit of Olive Oyl's falling hearts. Atari VCS: 1 player, other formats: 1 or 2 players. Atari, C-64, TI 99/4A. Price depends on format.

Q*bert. The adventure and excitement of the arcade as players hop Q*bert up and down a pyramid of cubes, changing their colors as he goes. Atari VCS: 1 player; other formats: 1 or 2 players. Atari, Vic 20, C-64, TI 99/4A. Price depends on format.

Star Wars Return of the Jedi: Death Star Battle. As pilot of the Millenium Falcon, players maneuver through a moving force field and destroy the Death Star—this time for good. Atari VCS: 1 player; other formats: 1 or 2 players. Atari. Price depends on format.

Star Wars: The Arcade Game. Players are behind the controls of an X-Wing Fighter, fending off an army of Imperial Fighters as they do their best to destroy the infamous Death Star. All formats: 1 player. Atari, C-64. Price depends on format.

Super Cobra. Players fly their choppers through an obstacle course of caves and mazes and tall city buildings, facing deadly missiles and weird sky-flying weapons. Atari VCS: 1 player; other formats: 1 or 2 players. Atari. Price depends on format.

Tutankham. Players wander through King Tut's tomb in search of fabulous treasure, facing the ancient and eerie creatures who guard the tomb. All formats: 1 or 2 players. Atari, Vic 20. Price depends on format.

Peachtree Software Inc.

Empire I: World Builders. Experience the worlds of empire through your characters. Each will hold distinct physical and psychological traits. The gaming environment subjects you to harsh reality. Any surviving characters will be stored to disk to be called on for future adventures. Apple, Franklin Ace. $32.95.

Empire II: Interstellar Sharks. Part two in a space-action trilogy, exciting and unexpected obstacles (Fyrokken's airless mines, the cutthroat floor of Cobol's stock exchange, and endless bureaucratic regulations) await you as you try to outfit your spacecraft to take you to your final destination. Apple, Franklin Ace. $32.95.

Prisoner 2. A game of escape. As a new arrival on The Island, you are expected to divulge certain information. You will not leave until we obtain it! A captivating stay with exciting, hi-res landscapes and seemingly escape-proof buildings. Apple, Franklin Ace, Atari disk. $32.95.

Penguin Software

Bouncing Kamungas. You are a melon farmer, trying to plant and harvest your crop in the midst of a lightning storm while the kamungas bounce out of the sky and smash your melons. Your only defense is a pitchfork, which also attracts lightning. Apple. $19.95.

The Coveted Mirror. Animated graphic adventure with arcade style games included. The medieval kingdom of Starbury has fallen under the rule of the black-hearted King Voar. All that stands between him and absolute power is one piece of the coveted mirror. Apple. $19.95.

Crime Wave. Arcade action chase game. Every felon in town is trying to knock off a bank in order to get the money to buy the dreaded Robot Rammer. Hop into your police cruiser and see if you can round up the robbers. Apple. $19.95.

Expedition Amazon. Fantasy role-playing game. Find the ruins of a fabled Inca citadel which is rumored to hold a great secret in its underground tunnels. Command a party of four specialists and watch your characters grow in skill and stamina. Apple. $19.95.

Minit Man. Two arcade games in one. You must first repair a bridge that the enemy's robots have destroyed so you can get missiles to your silo and launch them. The robots are also trying to sabotage the launch computer. Apple. $19.95.

Pensate. An original thinking game of evasion. Get to the top of an 8 x 8 grid while avoiding all other playing pieces. The computer has 10 types of pieces, each of which move in a pattern relative to the player's move. Multiple play options. 1 and 2 player modes. Apple, Atari, C-64. $19.95.

Pie Man. Non-violent arcade fun. Work your way up from baker's apprentice to head baker. When the pies come out of the oven, put whipped cream and a cherry on each and put them in the pie bin. Watch out for grease spots, flour sacks, and the wedding cake baker. Apple, Atari. $19.95.

The Quest. Many ways to solve this graphic adventure. As the King's adviser, you must accompany his champion, Gorn, on a quest to rid the kingdom of a dragon. With more than 200 locations and a parser that accepts full and multiple-sentence instructions, it fills two sides of a disk. Apple. $19.95.

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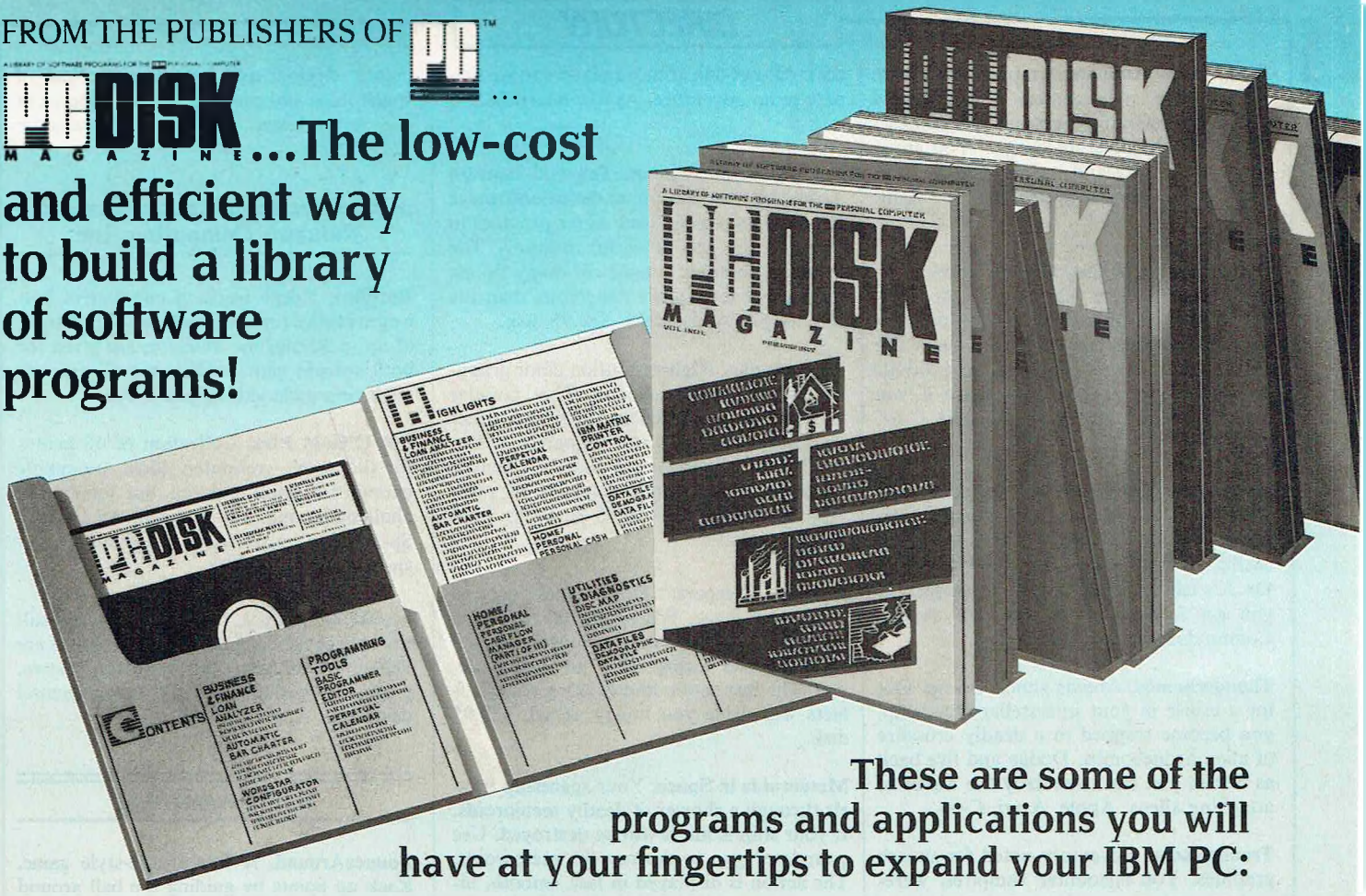

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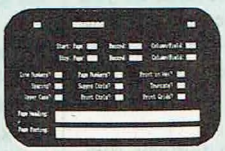

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Ring Quest. Animated graphics adventure with arcade style games. The sorceress Lisa has come into possession of a magical-ring that corrupts its owner. You must track down Lisa and reclaim the ring before she destroys everything in sight. Apple. $19.95.

Spy's Demise. A fast, addictive action arcade game where you gather dossiers, tapes, and microfilms from each floor of a Soviet diplomatic mission. But avoid the embassy guards who make frequent rounds at unscheduled intervals. A prize if you crack the secret code in time. Apple, C-64, Atari. $19.95.

The Spy Strikes Back. Arcade action. The spy must evade the electronic guards while searching the 120 sections of a five-story castle to round up clues needed to locate Dr. X's laboratory. If you solve the puzzle, you get $100 worth of software. Apple, Commodore, Atari. $19.95.

Thunderbombs. Arcade shoot 'em up. Out for a cruise in your interstellar cloudship, you become trapped in a deadly crossfire of alien dronebombs. Dodge and fire back as fast as you can to destroy the waves of attacking aliens. Apple, Atari, C-64.

Transylvania. Adventure noted for superb graphics. You encounter vampires, werewolves, and many other creatures as you search the forest and castle for Princess Sabrina. If you don't put the clues together in time, the princess dies at dawn. Atari, Apple. Price on request.

Xyphus. A breakthrough in fantasy role-playing games. A series of scenarios with continuing characters allows an infinite variety of spells, weapons, and monsters. Each scenario takes only a couple of hours to play, yet all are linked together in a larger game. Apple. $19.95.

Pryority Software, Inc.

Forbidden Quest. An interactive science fiction adventure, combining spellbinding prose and five original art prints to provide hours of enjoyment for the novice or experienced adventurer. Apple, Macintosh, IBM PC & PCjr. $39.95.

Quality Software

Ali Baba And The Forty Thieves. Encounter sultans, thieves, fierce and friendly creatures as you guide your alter ego, Ali Baba, through the thieves' mountain den in an attempt to rescue the beautiful princess. Allows one or more players to participate in an adventure. Apple, Atari. $32.95 disk.

Beneath Apple Manor. Descend beneath Apple Manor into an underground maze of corridors, rooms, and secret passages in quest of rich and powerful treasures. The dungeon complex consists of many floors, each lower level more dangerous than the last. Apple, Atari, IBM. $19.95 disk.

Fastgammon. High-resolution color graphics and musical cartoons. This popular program is the standard to which other backgammon games are compared. A special feature allows you to play the previous game using the same sequence of rolls. Apple $24.95 disk; $19.95 cassette; Atari $19.95 cassette.

Jeepers Creepers. Draw lines around boxes in a maze. When you fill in a box, you earn points and other bonuses. But beware the evil wasps—they are out to get you. The fast action and exciting sound effects will drive you buggy. Atari. $29.95 disk.

Meteoroids in Space. Your spaceship travels through a shower of deadly meteoroids. If your ship is hit, it will be destroyed. Use your laser gun to destroy the meteoroids. The action is displayed in fast, smooth, hi-res graphics. Apple. $19.95 disk.

Name That Song. Two players listen while the Atari starts playing a tune. As soon as a player thinks he knows the name of the song, he presses his assigned key. The computer will ask him to name that song. More than 150 songs. Atari $14.95 cassette; $17.95 disk.

Pro Poker. Now you can play eight-handed poker any time. Learn good poker techniques by watching the computer play all eight hands. If you like, play alone against seven serious computer players using the kibbitz mode. Apple. $39.95.

QS Reversi. Reversi is an ancient game of strategy, more recently called Othello. 12 levels of play. Excellent algorithms allow it to make its move decision very fast. Apple disk $29.95.

The Return of Heracles. Assume the role of an ancient Greek hero or heroine. Choose from 19 heroes. Twelve difficult and dangerous tasks will be assigned to you. Earn fame and fortune while fighting foes and evading enemies. Atari, Commodore. $32.95 disk.

Starbase Hyperion. You will soon become absorbed in this intriguing, original space simulation of war in the far future. You create, deploy, and command a fleet of space ships and manage ground support at the same time. Atari. $19.95 cassette; $22.95 disk.

Rainbow Computing, Inc.

Bat-Stat. Keeps track of cumulative batting statistics for a baseball or softball team of up to 20 players. Statistics are given for both current game and season. Team roster listing included. Apple. $49.95.

Pot O'Gold Plus. Collection of 46 games for the Apple computer. Most are simple enough for small children, but some more challenging ones are included. An Echo II Speech Synthesizer adds the dimension of speech. Apple. $39.95.

Stellar Defense. A fast-paced, hi-res, real-time space adventure. At your disposal are deflector shields, the positron beam, plasma torpedoes, and the experimental death ray. Apple. $49.95.

Reilly Associates

BounceAround. A fast arcade-style game. Rack up points by guiding the ball around the bouncing chamber. But watch out for the voids. Random playing board, color, sound, bonus balls and more. 3K or SuperExpander. Vic 20. $9.95.

Fantasy Character Generator. A playing aid for fantasy role-playing gamers. Create any number of characters quickly. Includes class, race, 13 base stats, magic talents, hit points, possessions and more. 8K Expander minimum. Vic 20. $8.95.

Science Fiction Word Juggler. A fun-filled word game for science fiction fans. Can you correctly identify the 100 scrambled words? Play against a time limit. Create your own word list for yourself and friends. 8K Expander minimum. Vic 20. $6.95.

Salamander Software

The Cricklewood Incident. A completely different adventure: as Arnold Q. Volestrangler (the 14th) you lie in your padded cell waiting for the launderette to open. Why not look for the Holy Grail while you wait? Dragon 32, TRS-80 Color Computer. £7.95.

Dragon Trek. A real-time version of this classic space game. Features full-colour

tactical, status and long range scanner displays, hyperprobe, tractor beams. 10 levels of difficulty. Dragon 32, TRS-80 Color Computer. £9.95.

Eagle. A totally original arcade game. You must pilot your Eagle survey ship to the fabled moons of Thrug, harvesting the iridium pods and avoiding asteroid belts, tunnel walls, laser defences, volcanoes and magnetic anomalies. Dragon 32, TRS-80 Color Computer. £7.95.

Everest. An accurate strategic simulation of a modern six-man attempt to climb the world's highest mountain. Will your attempt end in tragedy, or will your name live forever in the annals of mountaineering history? Dragon 32, TRS-80 Color Computer. £7.95

Fishy Business. The culmination of the Dan Diamond trilogy. Having plumbed the depths of *Franklin's Tomb* and been *Lost in Space,* you decide something is afoot, and it smells like *Fishy Business.* Comes with illustrated casefile. Dragon 32, TRS-80 Color Computer. £9.95.

Franklin's Tomb. An adventure game for the relative novice, featuring our hero Dan Diamond. Features formatted display with constant inventory and lavishly illustrated 20-page case file. First of a trilogy. Dragon 32, TRS-80 Color Computer, C-64. £9.95.

Games Compendium D1. Six games for the whole family: *Donkey Derby, Blackjack, Kingdom, Hunt the Wumpus, Noughts and Crosses* and *Lunar Lander.* Dragon 32, TRS-80 Color Computer. £7.95.

Golf. An Accurate interpretation of the game written by a keen club player. Can be played by one or two players. Features full club selection, hazards, out of bounds, and player handicaps. Dragon 32, TRS-80 Color Computer. £7.95.

Lost in Space. The second part of the Dan Diamond trilogy. Can you, as Dan Diamond, find an escape from a derelict space ship filled with chatty doors and bored security robots, or will you be doomed to travel endlessly through space? Comes with illustrated case file. Dragon 32, TRS-80 Color Computer. £9.95.

Nightflight. An accurate simulation of flying a single-engine light aircraft at night. Allows for take-off, landing, and aerial maneuvers such as loops, rolls, dives, and spins. Dragon 32, TRS-80 Color Computer. £7.95.

Starjammer. An arcade game requiring one joystick. Pilot your StarJammer spaceship from Stargate to Stargate, shooting down the enemy fighters. Dragon 32, TRS-80 Color Computer. £7.95.

Super Skill Hangman. Hangman as you have never played before. Features a vocabulary of more than 1000 words (English spelling), hi-res graphics, three levels of difficulty, and optional countdown timer. Dragon 32, TRS-80 Color Computer. £7.95.

Vulcan Noughts & Crosses. In color graphics, a game of 3D tic-tac-toe for fans of logical strategy games. Play against the computer or a friend, or select zero-player and watch the machine play against itself. Dragon 32, TRS-80 Color Computer. £7.95.

Wings of War. An adventure game for one player. As Lt. Roger Wilcoe, you are parachuted into France in 1942 to infiltrate the chateau at Azey le Rideau and escape with the secret plans for a new bomb. Dragon 32, TRS-80 Color Computer, £7.95.

Wizard War. A game of magical combat between the wizards of the Tri-Suns for supremacy of the planet Xarg. Complete with illustrated spellbook featuring 24 different spells. For 2 to 9 players. Dragon 32, TRS-80 Color Computer, C-64. £9.95.

Howard W. Sams & Co., Inc.

Ape Escape. You're Harry the Ape, freshly escaped and on the move, doing your best to evade capture. Full-color video, fast action, exciting sounds, and unlimited challenge. 1 player. Apple. $29.95.

Bermuda Race. Simulates a sailboat race to Bermuda in which you chart your progress, deal with the unexpected, and find out how good a sailor you are—or aren't. Has on-line sailing tutorial, manual and more. Apple. $29.95.

Caves of Olympus. You're the only good-guy robot left and must escape Olympus by means of a vessel hidden somewhere in the Caves. Find it before time or the enemy gets you. Many special effects and full color. Apple. $29.95.

Czorian Siege. Try to blast eight different, identity-swapping spacecraft that attack you viciously. Distinctive sounds, brilliant color, and 10 levels of difficulty. 1 or 2 players. IBM PC & compatibles. $29.95.

Music Games. Twelve menu-driven games using musical tones and animated notes on a scale to test for note and rhythm recognition. For various skill levels in one or more players, ages 5 through adult. Apple. $29.95.

Regatta. You control tiller and sails as you race a friend or the clock on four different sailboat race-courses. On-line help, richly colorful displays, easily understood manual. For 1 or 2 players. Apple & compatibles $29.95.

Spud/Mug Shot. In Spud, two players try deflecting a wandering spud into the opponent's fort, while in Mug Shot, 1 to 4 players try to free and destroy mugs before mugs destroy them. Two-game package in color. Apple. $29.95.

Voyage of the Valkyrie. You battle war birds as you try to map the island successfully, conquer it, and claim its gold. Has music from Wagnerian operas, finest animated graphics, 10 levels of difficulty, blank maps. Apple. $29.95.

Scarborough Systems, Inc.

Run for the Money. Fast-paced arcade action game that two can play simultaneously challenges. Business skills in an alien environment. Tom Snyder's newest program. IBM PC, Apple: $49.95; C-64: $39.95.

Screenplay

Asylum. You are trapped in an asylum which is a maze of strange rooms and stranger inmates. Includes scrolling three-dimensional graphics. Full sentence input helps you escape. C-64, Atari, IBM PC. $29.95.

Dunzhin. The first game of the "Warrior of Ras" series. Fantasy role-playing game includes 20 levels to pass through to reach the bottom of the dungeon. C-64, Atari, Apple, IBM PC. $29.95.

Institute. In this text adventure game you enter into five different dreams as you try to find an escape from the Institute. You are better able to work your way through it using Freudian solutions. C-64, Atari, Apple. $29.95.

Kaiv. The second in the "Warrior of Ras" series. You may encounter all types of creatures that you must conquer to move on through the cave. C-64, Atari, Apple. $29.95.

Ken Uston's Professional Blackjack. Play the best casinos in the world with the top professional blackjack player, Ken Uston, as your instructor. You are taught the techniques that earned Uston more than $5,000,000. Atari, C-64, Apple, IBM PC. $69.95.

Playful Professor. It can be fun to learn math skills, which include addition, subtraction, multiplication, division, and fractions. Each correct answer to a problem brings players closer to the golden key inside the castle. C-64, Atari. $29.95.

Pogo Joe. You are presented with 64 different screens of cylinders to guide Pogo through. Graphics feature fully animated, three-dimensional characters. An enjoyable game for all ages. C-64, Atari. $24.95.

Wylde. The third adventure in the "Warriors of Ras" series. You find yourself out in the wilderness, and you must fight for your survival. C-64, Atari, Apple. $29.95.

Ziggurat. The fourth adventure game in the "Warrior of Ras" series. Find your way through a pyramid filled with dangerous creatures. Try to survive the bewildering maze of Ziggurat. C-64, Atari, Apple. $29.95.

Sega Enterprises, Inc.

Buck Rogers: Planet of Zoom. It is the 25th Century. You are Buck Rogers fighting the battle of Planet Zoom. Your race against death has just begun. Prepare for battle with your most powerful enemy: aim steady, but hurry . . . your fuel is dangerously low. Atari, C-64, Vic 20. Price varies.

Congo Bongo. You're on a jungle safari packed full of wild and zany adventures. Climb the cliffs and cross the treacherous lake to bag the most mischievous gorilla in the jungle. But be careful . . . one slip and it is safari heaven. Atari, C-64, Vic 20. Price varies.

Star Trek: Strategic Operations Simulator. Now you can command the fate of the U.S.S. Enterprise in this home version of the hit arcade game. Hours of challenge await you. Atari, C-64, Vic 20. Price varies.

Sentient Software Inc.

Cyborg. A science fiction adventure created by Michael Berlyn. One of the first adventures with a plot and character development. Apple, Macintosh, Lisa, IBM PC & PCjr., Atari, Commodore, Hewlett-Packard. $34.95.

Sierra On-Line Inc.

Apple Cider Spider. Help friend spider climb to his web in the rafters. At risk of life and limb, you must guide the spider up through the cider mill to his web in the attic. Climb, jump and crawl through various obstacles: falling apples, streams of juice, and marauding birds, frogs, and wasps. Apple, C-64. $29.95 disk; $34.95 cartridge.

Aquatron. Jet into action and defend against enemy attackers. You had better be in top physical condition, with a sharp eye and quick reflexes, for this one. Your enemies are swift and ever multiplying. Apple, Atari. $29.95.

B.C. Quest For Tires. Watch Thor ride his wheel over rocks, logs and ditches, rivers and chasms. Follow him through volcanic eruptions and deep caves. Help him brave the dragon to rescue his own true love, Cute Chick. Apple, Atari, C-64, Coleco. $34.95 disk; $39.95 cartridge.

Cranston Manor. Go on a perilous treasure hunt in a haunted mansion. Old man Cranston has died, leaving his treasures to molder in the old manor. Anyone who is courageous (or foolhardy) enough to brave the booby traps and strange guardian spirits may try and claim them for his own. Apple. $29.95.

Crossfire. Fast-paced action makes this arcade game both challenging and fun to all levels of players. Do battle against regenerating aliens in a maze of city streets. Apple, Atari, C-64, IBM PC & PCjr, NEC. $29.95 disk.

Dark Crystal. Based on the Jim Henson movie. Follow the touching story of Jen, the last boy Gelfling, and Kira, the last girl Gelfling. Help them find and restore the lost Shard to the Crystal. Meet all manner of strange creatures along the way. Apple, Atari, IBM PC & PCjr. $37.95.

Dragon's Keep. A junior adventure game written at an easy reading level. Basic skill focus includes reading comprehension, map reading, identifying details, making inferences, and drawing conclusions. The object is to free 16 animals held captive by a magical dragon. Includes a poster-size map, 16 animal stickers to be placed on the map as the animals are freed, a compass decal, and a Parent Guide. Apple, Adam, IBM PC & PCjr. $29.95 disk.

Frogger. The long-term best-selling arcade game. Dodge through speeding traffic and negotiate the treacherous river. Frogger fans include children and adults of all ages. Apple, Atari, C-64, IBM PC & PCjr, Adam. $34.95.

Jaw Breaker. Chomp your way through five tiers of sweets as you avoid being eaten yourself. Levels of difficulty to satisfy most players. Apple, Atari, C-64, IBM PC & PCjr. $29.95 disk; $34.95 cartridge.

Lunar Leeper. Your people are stranded in the valley of the dreaded Leepers. Your mission: to rescue as many as possible, without being eaten yourself. Then go deep within the caverns of the planet and destroy the evil controller. Apple, Atari, C-64. $29.95 disk; $34.95 cartridge.

Mission Asteroid. An asteroid of huge proportions is on a collision course with the planet Earth. As an astronaut, you must rocket to the asteroid and alter its course. If procedures and instructions are not followed precisely, disaster is imminent. Apple, C-64, Atari. $19.95.

Mr. Cool. Join Mr. Cool in fast-paced action. Help him to dodge fireballs and hot springs while he cools off sizzling hot plates. Many levels of difficulty in this challenging game. Apple, Atari, C-64, IBM PC & PCjr. $29.95 disk; $34.95 cartridge.

Mystery House. A treasure is hidden somewhere in Mystery House: You must search from attic to cellar as you stumble over body after body. One of the seven inhabitants of the house is a killer. Can you find the treasure before you become one of the victims? Apple. $19.95.

Oil's Well. Many levels of challenge that players of all abilities can enjoy. Dig deep for oil pellets and valuable goblets, but watch out for bombs and oozies. Apple, Atari, C-64, Coleco, IBM PCjr. $29.95 disk; $34.95 cartridge.

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Sammy Lightfoot. Sammy Lightfoot is an amazing acrobat. He leaps huge circus balls, swings on ropes and bounces high on his trampolines. Sammy makes death-defying jumps from moving platforms and dodges lethal plungers. He even does stunts above deadly flames and rides a magic carpet. Apple, C-64, Coleco. $29.95 disk; $34.95 cartridge.

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Life Simulation. Designed for grades 5-12. The machine language program simulates cells in birth, death, and survival. Has 10 setups included in the program or the student can setup own. Includes sound too. TRS-80 Model III. $19.95 tape; $24.95 disk.

Math Disk 12. For grades 10-12 or gifted students of younger ages. 12 math programs, including six algebra, four trig plus geometry and more. Disk runs from a menu program and is easy to use. TRS-80 Model III. $99.95.

Pacmath. Algebra program mixing solving of equations with the popular arcade game Pac-Man. Eight levels and four types of equations. Printouts of tests/worksheets also available. Networkable. TRS-80 Model I, III, 4, & color computer. $19.95 tape; $24.95 disk.

Planets. Designed for grades 3-10. Offers 10 options for studying our solar system. Included is a 3-D journey and the Incredible Shrinking Universe as well as a test option. TRS-80 Model I & III. $19.95 tape; $24.95 disk.

Trig Pack of 4. 1) Sine/Cosine curves. 2) Triangle solver. 3) Geometric sequences (covers 3 types). 4) Polar/Rectangular conversions. Networkable. TRS-80 Model I & III. $24.95 tape; $29.95 disk.

Word Search. Make word search puzzles with ease and up to 30 words in each puzzle. Puzzles may be on the screen or to any 80-column printer. Also produces keys to screen or printer. Up to 30 x 14 in size. TRS-80 Model I & III. $19.95 tape; $24.95 disk.

Alkazar Associates

Shape Maker. Allows you to create shapes quickly and easily that can then be put into shape tables and used as graphic additions to programs or combined into games. On-screen drawing. Menu-driven; demo on disk. Apple. $24.95.

Touch Typing Made Easy. Fifteen lessons to free you from looking at the keyboard while typing. Uses time-tested methods for teaching typing plus new techniques made possible by the unique capabilities of the IBM PC. Not a game. IBM PC, XT & PCjr. $24.95.

Applied Educational Systems

Daily Attendance Accounting. Processes mark sense cards at the start of each school day and produces an absentee list. Information may be updated throughout the day as required, and attendance may be kept by class on a daily basis. Apple, TRS-80 Models III & 4, Kaypro 4 & 10, IBM PC, XT. $950.

Educational Assessment Test Scoring. Processes mark sense cards and corrects multiple choice tests of up to 100 questions, correlating test questions and objectives. Apple, TRS-80 Model III & 4, Kaypro 4 & 10, IBM PC, XT. $950.

Grade Reporting. Processes mark sense cards and produces full-sized report cards with student name, homeroom number, parent name, address, a school-wide message, teacher and course names, and numerical or letter grades, plus course comments, cumulative credit hours, and attendance data. Apple, TRS-80 Model III & 4, Kaypro 4 & 10, IBM PC, XT. $950.

Scheduling. Processes student pre-registration mark sense cards and prints 13 reports that assist the guidance department in making its master schedule. Apple TRS-80 Model III & 4, Kaypro 4 & 10, IBM PC, XT. $950.

Artworx Software Company Inc.

Hodge Podge. Provides an enjoyable and non-intimidating introduction to learning and computers for children from 18 months to 6 years of age. Consists of many cartoons, animations and song. Provides everything from Apples to Zig-Zags for the child to explore. C-64, Vic 20, Apple, Atari. $21.95.

Monkeybuilder. A colorful animated program in which Marc the monkey tries to build a hut to live in. He uses word parts which, when correctly combined, form the basic building blocks for his home and are hauled up high into the tree to make the hut. (K-6). C-64, Apple, Atari. $29.95.

Monkeynews. An innovative reading comprehension program. Increases your child's ability to read and understand by enabling him to participate in the story, answer questions, check facts and type his own headlines into the *Monkeynews.* (grades 1-6). C-64, Apple, Atari. $29.95.

Monkeymath. Graphics and animation couples the fun and excitement of an arcade game with the opportunity to learn. Children ages 4-10 can practice number placement, addition, subtraction, multiplication and division. C-64, Vic 20, Apple, Atari. $24.95.

Bible Research Systems

The Word Processor. The entire text of the King James Bible is included in a database, with a program that allows random search for any word or phrase. You can index the Bible in any way meaningful to your personal study. Apple, IBM PC, TRS-80, Osborne, Kaypro, C-64, CPM/Z80, MS-DOS. $199.95.

Blue Sky Software, Inc.

Race for the States. Educational game for the C-64—so exciting and interesting that you hardly notice you are learning as you attempt to become President by winning electoral votes with the right answers. C-64. $29.95.

Boston Educational Computing inc. (BECi)

Add/Sub. Addition/subtraction program for ages 5-9. Optional borrows/carries, decimal points, hints, and adjustable timing. Extra-large digits. Vic 20, C-64, Atari. $19.95 tape; $24.95 disk.

Alpha-Beci. Twenty-six screen alphabet program for pre-school children. Uppercase and lowercase letters (8 times normal size) and an object for each letter. Vic 20. $19.95 tape; $24.95 disk.

Fruit-tree/Gumball. Two counting and elementary addition/subtraction programs. Rich graphics and audio feedback and rewards. Ages 2-6. Vic 20, C-64. $19.95 tape; $24.95 disk.

Number Beci. Number recognition, object discrimination and grouping, counting. Large digits. Ages 2-6. Vic 20, C-64, Atari. $19.95 tape; $24.95 disk.

My Book. A story-making program. Youngster selects objects from a library to build the pages of a book with/without typed story line. C-64. $34.95 disk.

Mult Beci. Multiplication program up to four digits, all extra-large. All answers, including intermediate answers, entered digit by digit, right to left. Ages 7-11. Vic 20, C-64, Atari. $19.95 tape; $24.95 disk.

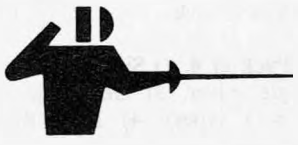
Shape Games. Two pattern recognition and pattern completion games. Useful in developing perception and pre-reading skills. Ages 2-6. Vic 20, C-64. $19.95 tape; $24.95 disk.

Broderbund Software

MasterType. A typing instruction program that plays like a fast action arcade game. You learn touch-typing basics and then move on to improve typing speed and accuracy as you battle waves of attacking words. Vic 20. $39.95.

The Cactusplot Company

Cactusplot: A Mathematics Utility. Graphs functions, solves equations, performs numeric integration and differentiation. Prints tables of values. Professional version only: saves graphs to disk, writes text on graph, finds area between curves. Apple. Professional version: $59.95; student version: $35.



The Cactus Grade Book. A grade-keeping program for the classroom teacher. Calculates totals and class and student averages. Prints individual student reports and whole class records. Apple, IBM PC. $45.

Class 1 Systems

QuizRite. A test question management program for teachers. Generates four question formats from a single data file. File compatible with *TestRite.* Easy to use editing and test creation features. TRS-80 Model III & 4, Apple. $89.

TestRite. A test question management program for teachers. Generates four question formats from a single data file. Referencing, item selection, and numbering features—a flexible utility. TRS-80 Model III & 4, Apple. $139.

Comm*Data Computer House, Inc.

Edupacs. Six programs in a vinyl envelope for the subject areas of math, English, science, and geography. Stresses positive reinforcement, has colorful graphics. C-64, Pet. $19.95.

Edupac—English 1. Learn to write sentences and identify parts of speech. An arcade style game about vowels and a program with short stories to test reading comprehension are also included. (tape or disk). C-64, Pet. $19.95.

Edupac—English 2. Colorful graphics make learning easier with the memory builder exercises for antonyms, homonyms, synonyms, and spelling. Also included: a game about nouns and verbs, and another for adjectives (tape or disk). C-64, Pet. $19.95.

Edupac—Geography Pack 1. Formatted programs show how to identify cities, countries, capitals of cities, Presidents of the U.S.A., capitals of nations, and map co-ordinates and compass directions (tape or disk). C-64, Pet. $19.95.

Edupac—Mathpack 1. Six different programs featuring addition and subtraction. Colorful graphics and positive reinforcement are used throughout in both the games and the drill programs (tape or disk). C-64, Pet. $19.95.

Edupac—Mathpak 2. Each program features a different math subject. Multiplication, Roman numerals, decimals, fractions,

percentages, and square roots are presented with colorful graphics and positive reinforcement (Tape or disk). C-64, Pet. $19.95.

Edupac—Sciencepack 1. Two graphic tutorials featuring atoms and constellations; four game format programs dealing with inventions; insect names; and differentiating between animal, vegetable, and mineral; or mammals and reptiles (tape or disk). C-64, Pet. $19.95.

English Invaders Games. Four games to sharpen English skills. Students learn to recognize valid words, to differentiate between long and short vowels, and to identify the different parts of speech. Lively graphics. C-24, Vic 20, Pet. $27.95.

Gotcha Math Games. Match wits with the Gotcha Machine, win horse and drag races, and shoot down aliens with correct math answers. Addition, subtraction, multiplication, and division problems. Colorful graphics. Grades 1-8 (tape or disk). $27.95.

Primary Math Series. Addition 1 and Subtraction 1 use single digit problems while Addition 2 and Subtraction 2 teach two digit math with borrowing and carrying. Programs have large graphics and a performance summary. Grades 1-4. C-64, Vic 20. $27.95.

Math Tutor. Graphic aids representing the number of units in each number demonstrate the math processes for column addition, subtraction with borrowing, multiplication, and division. Grades 3-6. C-64, Pet, Vic 20. $27.95.

Toddler Tutor. Consists of four separate pre-school programs that teach the alphabet, counting with numbers up to 20, color recognition, and a memory game. (tape or disk). $27.95.

COMPress

Biobits. An interdisciplinary series that deals with ecology issues: predator/prey relationships, population growth, evolution. Apple. $350.

Cases 2. Teaches investigative techniques. Describes a program and names five possible lines of inquiry. Student attempts to gather data and solve the problem. For student use at the computer. Apple. $50.

EnBasic Authoring System. Direct experience with a wide range of systems and user needs led to identification of routines and authoring aids critical to preparation of high-quality, user-friendly materials. EnBasic can be used without hardware modification. Apple. $150.

English Grammar Drills. Students gain practice in the areas of grammar that often cause problems. They can pinpoint weaknesses and improve skills. Apple. $200.

Improving Your Writing—Wordy. Designed to make students aware of the common forms of wordiness and to help them develop a more concise style. Imaginative graphics and animation illustrate the basics of good writing. Apple. $100.

Introduction To Crystallography. For the chemist who wishes to understand or to use the wealth of crystallographic X-ray structural information that has appeared. Introduces the principal axial systems likely to be encountered. Apple. $100.

Introduction to General Chemistry. Designed as a stand-alone supplement to an introductory course in general chemistry for students without previous chemistry background. Simulated experiments are used to develop basic concepts. Apple. $340.

Introduction To Organic Chemistry. A supplement to a first course in organic chemistry. They provide an introduction with practice on nomenclature and simple reactions of alkenes, alkyl halides, alcohols, aldehydes, and ketones, and more. Apple. $375.

Mendelian Genetics. An interactive tutorial, plus simulated laboratory allows students to begin with a simple, tentative explanation of how populations grow and progress to new concepts until they can predict phenomena accurately. Apple. $60.

Molecular Animator. Allows you to construct and display molecular structures of your choice. Designed to rotate at various speeds around all three axes. You can change a structure or whole groups within it. Apple. $75.

Organic Qualitative Analysis. Tests student's ability to identify organic compounds. Students are given a "real unknown from one of the 25 unknowns included on this disk." Apple. $75.

Pacor: Multiple Choice Tester. Allows you to save questions and answers in multiple choice format. The computer automatically generates, administers and grades tests, keeping a record of student scores. For student use at the computer. Apple. $50.

Statistics And Probability Demonstrations And Tutorials. Illustrates the concepts of statistics with graphics, practical tutorial problem, and simple simulations. Written to be used in conjunction with lectures and standard texts. Apple. $400.

Test Generator. Flexible tool allows you to create an extensive file of tests, which are generated and printed randomly with or without answers. No limit to the number of questions that can be stored. Apple. $50.

World Clock. Shows how the earth's movement causes day and night. Teaches the progression of seasons. Apple. $40.

Computer Easy Inc.

Math Climbers. As the math problems scale the wall to attack, you must answer quickly or bear the consequences. From simple addition to complex problems, you can score and test your skills against others. IBM PC, PCjr. $19.95.

Read Easy. The fun and easy way to build speed in reading and comprehension. A library of more than 60,000 sentences allows you to have hundreds of hours of fun and learning enjoyment (grades 1-6, and adults). IBM PC, PCjr. $19.95.

Spell Castle. Your spelling needs can be met by using the built-in dictionary of 6000 frequently misspelled words. Save your castle from falling words. Words may be added. IBM PC, PCjr. $19.95.

Conduit

Acid/Base Titrations. Eight programs cover mono-protic acid titrations, indicators, carbonate effects, poly-protic acid titrations. Apple. $75.

Algebra Drill & Practice I. Provides drill, practice, and help for students of algebra through unlimited example problems and detailed, step-by-step solutions. Covers algebraic signs through word problems. Apple. $125.

Algebra Drill & Practice II. The programs provide drill, practice, and review of algebra topics: solving inequalities, factoring linear and quadratic expressions, x-intercepts, and the vertex of parabolic graphs. Apple. $125.

Arbplot. The calculus instructor can demonstrate plotting curves from functions or illustrate concepts of integration, sequences, and series, and methods of finding roots. Instructor can create/run "slide shows" of graphic illustrations. Apple. $125.

Baffles. An interactive game designed to help students develop their deductive reasoning. The object is to determine the location and tilt of hidden deflectors from the projection of deflecting laser beams. Apple. $50.

Biznes. Stresses the economic theory of a firm. Students enter basic decisions about capital, labor, and price, which the program tabulates. The demand curve, the production function and resource supply constraints are emphasized. Apple. $65.

Catlab. A genetics simulation that allows students to mate domestic cats selected by coat color and pattern. Students learn the principals behind transmission genetics while testing, generating, and refining scientific hypotheses. Apple. $75.

Change Agent. Simulation/game helps students understand the role of a change agent and the strategies used to accomplish diffusion of innovation. Seven strategies help students learn about the innovation. TRS-80. $40.

Chem Lab Simulation #1. Contains several common lab applications and can be used to demonstrate actual lab procedure and to assist students in gaining a better understanding of the typical calculations needed to process the lab data obtained. Apple, Atari. $80.

Chem Lab Simulation #2. Contains two simulations dealing with the behavior of ideal gases. Ideal Gas Law Simulation allows the student to vary certain effects on gases and to get a graphic display. Apple. $80.

Chem Lab Simulation #3. "Calorimetry" is Hess's law of heats of reaction. In four experiments, the heat capacity of the calorimeter is measured. Following this, heat released is measured when different forms of NaOH is added to solutions of HCl and water. The laws are thus verified. Apple. $80.

Chem Lab Simulation #4. "Thermodynamics" simulates two experiments: 1) helps the student find the heat of vaporization of an unknown liquid; 2) helps him to figure the enthalpy, entropy, and free energy of an equilibrium reaction. Apple. $80.

Chemical Principles for Introductory Laboratory. Covers five topics of general chemistry: chemical equilibrium, acid titration, formation constants, reaction rates, and Beer's Law. Apple. $75.

Coexist. Simulates two biological situations. Students model one or two populations to grow independently on identical limited food sources. Once familiar, two populations can be simulated to compete under controlled pressure. $45.

Compete: Plant Competition. Simulation enables students to plan and carry out investigations of interaction between flowering plants without the long delay associated with growing. Five investigations are possible with Apple, seven with TRS-80 and Pet. Apple, Atari, Pet. $45.

Computer Lab in Memory and Cognition. To gain a deeper understanding of the basic phenomena of cognitive psychology, students participate as subjects in some of the most significant experiments in the fields of memory and cognition. Apple. $175.

Dasher. A computer-assisted language drill program that includes four programs; French, German, Spanish, and English. The instructor with little or no computer experience can write language drills. Apple. $150.

Demo-Graphics. Programs present current and historical demographic data for many nations; project populations given current trends; and facilitate understanding of the impact of both real and simulated factors affecting world population growth. Apple. $85.

Descriptive Statistics. Provides supplementary materials in standard textbooks for precalculus statistics and probability courses. The student manual discusses methods of describing and summarizing raw data while the students practice applying the methods. Apple. $75.

Diffusion Game. Students learn about diffusion of innovations through a game emphasizing the management approach to effecting a desired behavior in a target population. Apple. $55.

Discovery Learning in Trigonometry. Students use the programs to discover how trigonometric functions are represented graphically and the cause and effect relationships between parts of equations and their graphs. Apple. $75.

English: Basic Mechanics Modules 1 through 5. 100 computer lessons cover the fundamentals of English grammar and punctuation. Self-paced program allows the student to choose from multiple choice answers on the screen or to create and modify sentence structures. Apple. $95.

Enzkin: Enzyme Kinetics. Fast, realistic results of enzyme-catalyzed reactions are provided. Introduces students to substrate inhibition, co-operativity and the influence of the cofactor. Six enzymes with different properties are simulated. Apple, TRS-80. $45.

Ecological Modeling. Students test hypotheses and predict results about ecosytems by controlling such parameters as initial population, growth rate, time length and others. Factors of capacity, random environment factors, and competition are also involved. Apple, TRS-80, Pet. $75.

Evolut: Evolution and Natural Selection. (BIO 082) Teaches factors of adaptation, adaptation related to survival, models of selection acting upon populations and alleles in a given environment and relation of adaptation to survival. Students select various parameters. TRS-80, Pet. $45.

Evolut: Evolution and Natural Selection. (BIO 140) Teaches how selection controls fluctuations in gene frequencies of wild populations, thus producing adaptations for the specific requirements of the environment. Based on familiar bead programs. Apple. $45.

Exploratory Data Analysis. Programs accompany the author's book, which presents selected basic techniques of exploratory data analysis. The programs analyze data by EDA techniques. Apple. $165.

Family Identification. Presents 74 major plant families for the student to learn and identify. Review Family Charateristics where the particulars of a family are reviewed. Identify Plant to Family Name can be used to identify the family of a plant. Apple. $50.

Firm: Florida Interactive Modeler. A simulation system for generating data in a variety of content areas. The system is content free. Requires *Firm Vol. Ion II* or instructor written model. Apple. $100.

Four-Letter Words. Tests the student's knowledge of words of four letters. Three programs are included: words from words; letters in given positions; and letters in any position. Instructor can create dictionaries to fit individual needs. Apple. $55.

Graphing Equations (including Green Globs). A four program package that graphs general functions and linear and quadratic equations. Graphs equations entered by the students, or the students determine the equations with "probes" providing clues to the graphs. Apple. $60.

Group Velocity. Students explore the behavior of waves in a dispersive medium by controlling the angular frequency and the wave number. The relationship of

group and phase velocity can be shown by comparing two slightly different cosine waves. Apple. $60.

Interp (Apple): Wave Superposition. Calculates the intensity due to the superposition of radiation from two sources. Students choose the complexity of the model and then compare the predictions of the model with experimental observations. Apple, TRS-80 Model III, Pet 2000, 4000. $45.

Interpersonal Dynamics: Firm Volume II. Three model package simulating psychological experiments dealing with general problems in interpersonal dynamics. Students conduct experiments and then observe, record, and analyze the measure of the dependent variable. Apple. $135.

Interpreting Graphs (including Escape). Two programs: 1) relating events to graphs in which students choose the appropriate graph for the described event; 2) student uses the graph as a diagnostic tool to capture bank robbers. Apple, Monroe EC 8800, MS8. $45.

Interval Drillmaster. Practice in identifying and notating simple melodic intervals. Self-evaluation facilities help students track their progress. Students may enter at any level, but must "pass" to next level. Apple. $75.

Introductory Mechanics. Uses problem solving to focus on the application of the Second Law to the simple harmonic oscillator and to the motion of particles in two dimensions, under the influence of uniform fields or one or more force centers. Apple. $55.

Haber (Apple): Ammonia Synthesis. The Haber process allows students to see how temperature, pressure, catalyst and reactant concentration ratios influence the course of the reaction, i.e., the time required to reach equilibrium and the equilibrium yield of ammonia. Apple, TRS-80, Pet. $45.

IDGame. A game for identifying organic compounds. The instructor assigns compounds from a database as unknowns to students. Students must identify the unknowns through simulated laboratory test results. The instructor can then audit the students' use of the programs. Apple, TRS-80. $75.

Laboratory in Cognition and Perception. Use the package to demonstrate the use of between-subject, within-subject, and mixed designs; explore the methodological decisions of a research. Nine well-known experiments are simulated. Apple. $140.

Lecciones de Espanol. Concentrates on the difficult points of Spanish, especially subjunctives. Exercises go from fill-in-the-blank to translating whole sentences. These progressively difficult lessons have 45 to 74 items in groups of 15. Apple. $110.

Life Tables and the Leslie Matrix. Concerned with changes in a population's age structure over time. Life Tables describes the basic life table; Leslie Matrix shows how to constuct a matrix from life tables; Manipulation allows student data input. Apple. $50.

Linkover: Genetic Mapping. Allows students to plan and execute a program of mapping experiments so they can draw an accurate genetic map of a single chromosome. A challenge for the students in planning genetic crosses themselves. Two-section program. Apple, TRS-80, Pet. $45.

Main Effects and Interactions. A five-part program that helps students discern whether two or more independent variables are exerting main and/or interactive effects on a dependent variable. Apple. $50.

Mark & Recapture. Animals are captured, marked, and released into their environment in this simulation. Students can sample the population randomly to check their estimates of marked animals to the actual number. Includes three population estimating models. Apple. $50.

Mathprogram. A general purpose problem-solving package for computational problems that tabulates recursive sequences. Feedback helps in correcting errors. Apple. $70.

Matrix Algebra. A sequence of units that takes the student through a step-by-step definition of a matrix and its elementary operations. For each operation, examples are given, followed by a drill and practice dialog. Pet 2000, 4000. $50.

Nature of Attitudes and Attitude Change: Firm Volume 1. Three data-generating models simulating social psychological experiments in attitudes and attitude change. Students "conduct" experiments and then observe, record, and analyze the measures of the dependent variable. Apple. $135.

Newton (Apple): Satellite Orbits. Uses an iterative method to calculate the path of a projectile launched horizontally to gain an appreciation of the application of Newton's Second Law and Law of Gravitation. Apple. $45.

Ordinary Differential Equations. The objective is to develop analytic and numerical methods hand-in-hand as a supplement to ordinary differential equations courses. Topics: Euler's and Runge-Kutta methods, series solutions, systems of equations. Apple. $85.

Osmotic Pressure. Two unique programs illustrate osmotic pressure. The first shows how osmotic pressure can be used to determine molecular weight of a non-ionizable solute. The second is an animation of a molecular model for osmosis. Apple. $50.

Phonics: Decoding for Teachers. Eight programs help teachers master the decoding concepts of phonics and structural analysis. Also provides students with additional exposure to fundamental concepts introduced in lecture. Includes post- and pre-assessment multi-choice test. Apple. $75.

Physics Examples I. Includes four programs in introductory physics that deal with the catapult of a projectile, one-dimensional collisions on an air track, the motion of an object acted upon by a central force, and a dart in projectile motion. Atari. $60.

Power. Helps acquaint students with the concept of power by allowing them to run simulated experiments with or without design improvements that minimize error variance and enhance power. Apple. $50.

Practicando Espanol con La Manzana II. Appropriate for all levels of Spanish language courses. Provides verb drills covering most tenses of Spanish verbs and vocabulary drills that can be keyed to any textbook that the instructor chooses. Apple. $110.

Predation. Includes two programs. Predator-Prey Dynamics utilizes the Lotka-Volterra model to simulate predator, prey and time relationships. Advanced Predation Models incorporate three models that enable the student to examine and compare graphic displays. Apple. $50.

PROFIS: Programs for Introductory Sociology. Use the concept of correlation between crime and social indicators to predict crime through linear multiple regression; uses contingency tables to explore the relationship between birth rates and indicators. TRS-80. $45.

RKinet. Simulation extends students' lab experience. Clarifies the relation between mathematical model and reality. First and second-order reactions, rate constants, concentrations and temperature variation on reaction rates are used. Apple. $45.

Samp: Survey Sampling. Can put into practice the theory and procedures for sampling and compare the merits of four designs: simple random, stratified, cluster, and quota sampling. Students conduct the surveys and receive a report on the costs. Apple, TRS-80. $70.

Scatter (Apple): Nuclear Scattering. Three programs simulate a variety of scattering experiments in which students can infer the shape and size of the target. Their predictions can be checked against actual experimental results. Apple, TRS-80, Pet. $45.

School Transactions. Simulations help bridge the gap between abstract educational theory and the real world of the classroom. Teachers must solve problems involving students, other teachers, parents, and administrators. Apple. $75.

Standing Waves. The basic concepts of standing and traveling waves are demonstrated—frequency, wavelength, wave velocity, harmonics, and superposition. Suitable for class, labs, assignments, or projects. Students don't need to have experience with waves. Apple. $75.

Surface. In using the exercises from the students sharpen their ability to visualize three-dimensional surfaces and become familiar with the parameters affecting a surface represented in two dimensions. Apple. $65.

Surfaces for Multivariable Calculus. A multiprogram utility for producing three-dimensional graphics intended primarily for classroom demonstrations, although adaptable for a lab setting. Apple. $65.

Survey Sampling. Introduces students to surveys and sampling procedures. Designed for students who can benefit from a basic understanding of how polls are conducted. Apple. $50.

Syllogistic Logic. Three drill and practice programs to help gain a working knowledge of syllogistic logic. Students then use the programs to practice identifying the four types of categorical propositions. TRS-80 Model III. $50.

Tribbles. Includes a written tutorial and computer simulation. Manning a spaceship that orbits an alien planet, students try to explain general things such as the locations of time "tribble-aliens" and specifics such as their behavior, birth, and death. Apple. $40.

Tuner. A drill in which the student matches two tones that are less than a normal half-step apart. Apple. $35.

United States Energy, Environment, and Economic Problems. Simulation studying the formation of public policy through the interaction of the U.S. economy, energy supply and demand, and the physical environment. TRS-80. $50.

Davidson & Assoc.

Math Blaster! Math facts program including more than 600 problems in addition, subtraction, multiplication, division, fractions and decimals for students ages 6-12. Includes a fast action arcade game and editor to enter additional problems. Apple, IBM PC & PCjr, C-64. $49.95.

Speed Reader II. Complete reading development course. Professionally designed exercises build reading speed and improve comprehension with just 30 minutes daily practice. Editor, grade-level analyzer, additional data disks. $69.95.

Word Attack! Vocabulary building program of four educationally well-designed and appealing exercises, including a fast-action arcade game for students ages 8-adult. Includes an editor to enter your own words. Additional data disks available. C-64 Apple, IBM PC, PCjr. $49.95.

Davka Corporation

Bible Baseball. Quiz game on the Old Testament featuring animated ballpark as backdrop. Computer pitches questions; answers score runs or outs. Features music, digitized voices, scoreboard, humorous questions. For solo or group play. Apple, C-64, Atari. $24.95.

Create-A-Quiz. Edition of Davka's *Bible Baseball* with extra questions—creating disk so that a player can create own questions on any subject. User may assign any of four levels of difficulty to the questions. Excellent for classroom applications. Apple, C-64, Atari. $34.95.

I.Q. Baseball. Baseball quiz game featuring questions on baseball fact, lore, and legend with animated ballpark as backdrop. Computer pitches questions; answers score runs or outs. Extra-questions disks available for all major league teams. Apple, Atari, C-64. $24.95.

Learning to Read Hebrew. Beginner's course or refresher that teaches how to read aloud Hebrew words and phrases. Learner proceeds at own pace, aided by frequent quizzes and review material. Optional sound tape. Apple, C-64, Atari, TRS-80 Model I. $50; with sound tape, $75.

DesignWare, Inc.

Creature Creator. Introduces young children (ages 4 to 8) to controlling the computer in a fun way. Children create monsters and program them to dance, developing skills important to reading and math: use of symbols, pattern recognition, and pattern matching. Atari, C-64, Apple, IBM PC & PCjr. $39.95.

Crypto Cube. A fun, yet educational word game for the whole family. Player must uncover words hidden behind four sides of a rotating cube. Words are grouped in categories, and 50 lists of 20 words each are included. Players can create their own puzzles with their own lists of words. Atari, Apple, C-64, IBM PC & PCjr. $39.95.

Math Maze. For children ages 6-11. Entertains while children practice math facts (addition, subtraction, multiplication, and division). Children chase through dozens of different mazes to answer math questions correctly. In the most advanced game, the maze is invisible. Children can create their own new mazes. Atari, Apple, C-64, IBM PC & PCjr. $39.95.

Spellagraph. An entertaining spelling game for children ages 7-14. Combines spelling practice with solving challenging picture word puzzles hidden behind squares. The child must spell words identified by context sentences correctly. One/two player option. Multiple skill levels. Atari, Apple, IBM PC & PCjr, C-64. $39.95.

Spellakazam. An entertaining spelling game for children ages 7-11. Children race the magician to spell words correctly. Includes over 400 words from the Silver Burdett spelling program, and children can practice their own spelling lists. Atari, Apple, IBM PC & PCjr, C-64. $39.95.

Spellicopter. An action spelling game for children ages 6-10. Pilot a helicopter with a limited fuel supply and maneuver it through skies crowded with thunderclouds and other obstacles to rescue stranded letters and carry them back to the landing pad. Atari, C-64, Apple, IBM PC, PCjr. $39.95.

Trap-a-Zoid. A fun way to increase children's (ages 7-14) practical geometry skills. Trap a "zoid" in appropriate shapes (as simple as squares and triangles or as complex as isosceles and scalene) and win points. Answer complex bonus questions. Atari, C-64, Apple, IBM PC & PCjr. $39.95.

DLM Teaching Resources

Alphabet Circus. Circus sounds and striking, colorful graphics are just part of the fun of learning about the alphabet. Six different activities help acquaint children with alphabetical order, letter recognition, keyboard skills, text creation, and so on. Apple. $29.95.

Arcademic Drill Builders: Wiz Works, Alien Action, Meteor Mission, Alligator Alley, Idea Invasion, Master Match. Packaged separately. Make a video game and learn. Insert your own content into these programs—math, spelling, foreign words, states. Each of the six programs contains a game sample that illustrates how your game will play. Apple. $44 each package.

Arcademic Skill Builders in Language Arts—Spelling Wiz. Challenge the Wizard. Learn spelling demons on a program designed to be used over and over at increasing levels of difficulty. Running time can be varied—but you won't want to quit (grades 1-6). Apple. $34.

Arcademic Skill Builders in Language Arts—Verb Viper. Challenge the Verb Viper. Practice subject-verb agreement. Game length can be changed and the program is designed to be used over and over at increasing levels of difficulty (grades 2-6). Apple. $34.

Arcademic Skill Builders in Language Arts—Word Invasion. Blast the parts of Speech. Let Alien Octopus show you parts of speech. The game can be changed in level of difficulty and running time to provide a challenging progression of practice on parts of speech (grades 2-6). Apple. $34.

Arcademic Skill Builders in Language Arts—WordMan. Travel the Maze. Build words. Length of game can be changed and the program is designed to be used over and over at increasing levels of difficulty (grades 1-3). Apple. $34.

Arcademic Skill Builders in Language Arts—Word Master. Learn the wonder of words. Practice antonyms, synonyms and homonyms. Running time is variable, and the program is designed to be used over and over, at increasing levels of difficulty (grades 2-6). Apple. $34.

Arcademic Skill Builders in Language Arts—Word Radar. Zero in on words. Guide the computer to a safe recognition of the essential sight words. With variable running time and increasing levels of difficulty (grades 1-4). Apple. $34.

Arcademic Skill Builders in Math—Alien Addition. Zap the numbers and learn. Basic addition facts in colorful video game format. Running time can be changed, and the program is designed to be used over and over at increasing levels of difficulty (grades 1-3). Apple, Atari, C-64, IBM PC. $34.

Arcademic Skill Builders in Math—Alligator Mix. Zap the numbers and learn. Basic addition and subtraction facts in colorful video game format. Running time can be changed, and the program is designed to be used over and over at increasing levels of difficulty (grades 1-3). Apple, Atari, C-64, IBM PC. $34.

Arcademic Skill Builders in Math—Demolition Division. Zap the numbers and learn. Basic division facts in colorful video game format. Running time can be changed, and the program is designed to be used over and over at increasing levels of difficulty (grades 3-6). Apple, Atari, C-64, IBM PC. $34.

Arcademic Skill Builders in Math—Dragon Mix. Zap the numbers and learn. Basic multiplication and division facts in colorful video game format. Running time can be changed, and the program is designed to be used over and over at increasing levels of difficulty (grades 3-6). Apple, Atari, C-64, IBM PC. $34.

Arcademic Skill Builders in Math—Meteor Multiplication. Zap the numbers and learn. Basic multipication facts in colorful video game format. Running time can be changed, and the program is designed to be used over and over at increasing levels of difficulty (grades 3-6). Apple, Atari, C-64, IBM PC. $34.

Arcademic Skill Builders in Math—Minus Mission. Zap the numbers and learn. Basic subtraction facts in colorful video game format. Running time can be changed and the program is designed to be used over and over at increasing levels of difficulty (grades 1-3). Apple, Atari, C-64, IBM PC. $34.

Construct-A-Word I and **Construct-A-Word II.** Children learn basic reading skills more quickly and accurately with this comprehensive kit. Includes: 10 disks, 24 blackline masters, a 32-page manual. Supertalker board required. Apple. $185.

Hint and Hunt I and **Hint and Hunt II.** Children learn basic reading and decoding skills more quickly, reinforced by hearing the words with which they work. Includes 10 disks, 24 blackine masters, a 32-page manual. Requires the Supertalker board. Apple. $185 each.

Number Farm. Make learning about numbers fun. Farm songs, animal sounds, and colorful graphics add to the fun of the six different activities which help acquaint children with the concept of number, recognition of numerals, and number words. Apple. $29.95.

Shape and Color Rodeo. Intriguing sounds and vivid graphics capture children's interest. They learn shape and color recognition and color mixing while they sharpen their visual perception, eye-hand coordination, and keyboard skills in the six activities. Apple. $29.95.

Educational Activities, Inc.

Africa. The study of African history or geography. Two levels introduce the many different aspects of African life. Part one: Africa is a continent with many different countries. Part two: cities, rivers, and landforms. Apple, TRS-80 Model III, 4, C-64. $59.

Annam: The Study of A Developing Country. An in-depth study of what it takes to run a country. You are the leader of a small nation and all your decisions have an impact upon the fate of your small nation—and on your ability to remain in control. Your country is Annam. Apple, TRS 80 Model III, 4, Pet, C-64. $59.

Astronomy: Stars for All Seasons. A tutorial and simulation science program on 34 constellations that can be seen from any latitude in the Northern Hemisphere. Includes program guide. Apple, TRS-80 Model III, 4, C-64. $49.95.

Basic Math Competency Skill Building. An interactive, tutorial and practice math program on basic math proficiency skills. Includes management system. For junior-senior high school students. Includes program guide. Apple, TRS-80 Model III, 4, C-64. $199, 12 cassettes; $259, 6 disks.

Cells. A tutorial, drill and practice science program that illustrates and explains the fundamental parts and functions of a cell. Includes program guide (grades 3-9). All Apple, TRS-80 Model I, III, 4, Pet, Atari. $45.95 cassette; $49.95 disk.

Classification of Living Things. An interactive-tutorial branching science program that constantly monitors comprehension and vocabulary recognition as the student discovers the need and value of classification. The Tree of Life. Management system (grades 7-10). Apple, C-64. $59.

Comp-U-Solve. Simulations of classical puzzles that test and stretch the thinking

capacity of your students through problem solving. A fun and challenging activity using a different type of instruction. Appropriate for junior-senior high and gifted students. Apple, TRS-80 Model III, 4, C-64. $59 per disk; $109 for two disks.

Computer Literacy Instructional Program (CLIP). A program designed for use by teachers, administrators, and other school-related personnel. Self-paced experience using drill and practice, tutorials, simulation, testing, and evaluation on the computer. Apple, TRS-80 III, 4, C-64, Pet. $69.

Diascriptive Reading I. A complete individualized reading program on vocabulary, details, inference, sequence, main idea, and a diagnostic test for all skill areas. Reading level ranges from 1.5 — 5.5. Program guide and six disks. Apple, TRS-80 Model I, III, 4, Pet, C-64, Atari. $295.

Diascriptive Reading II. A complete individualized reading program on vocabulary, details, inference, sequence, main idea, and a diagnostic test for all skill areas. The reading level ranges from 3 to 8. Includes program guide. Apple, TRS-80 Model III, 4, C-64, Pet, Atari. $295, 15 cassettes; $365, 7 disks.

Dragon Game Series for Language Arts. Series of programs that uses a game format to allow students to review and practice parts of speech while having fun. Animated graphics make the program motivational and exciting. Words can be added. Includes program guide. Apple, TRS-80 Model III, 4, C-64, Pet, Atari. $54 cassette; $59 disk.

EA Gradebook. An accurate way to keep all the teacher's grades and enrollment records in order. Allows the teacher to roster the names, I.D. numbers, and grades of all students; the teacher may add or delete names. Apple, TRS-80 Model III, 4, Pet, C-64. $59.

First Encounters. A tutorial, drill and practice computer library and programming program to introduce young children to the world of computers. Contains both computer and classroom activities. Includes management system (grades K-6). Apple, C-64. $98.

Heart Lab. An innovative program that uses animated graphics to produce a simulation model of an actual functioning human heart. Illustrates the various parts of the heart; traces blood flow through the arteries, veins, and chambers. Includes guide. Apple, TRS-80 Model I, III, 4 Pet, Atari. $29.95 cassette; $39.95 disk.

Informal Reading Comprehension Placement Test. A sequentially designed reading comprehension placement test that will determine a quick placement level for students in grades 1-8. Totally administered, scored, and managed by the computer. Includes program guide. Apple, TRS-80 Model III, 4, C-64. $34.95 cassette; $39.95 disk.

Keyboarding. Series of 20 lessons that presents a systematic and progressive approach to learning the keyboard. Keeps track of errors; frequent errors send the user to the appropriate drill. Progress noted by computer. Apple, TRS-80 Model III, 4, Pet, C-64. $99 cassette; $139 disk.

Lincoln's Decision. Leads you through the key events in President Lincoln's life and administration and the Civil War Period. You become President Lincoln, faced with the challenges and decisions that Lincolon had to face. Apple, TRS-80 Model III, 4, C-64. $59.

Math for Everyday Living. A tutorial and practice math program on real life and business skills. Instructional levels 4-6. Includes management system and program guide. Apple, TRS 80 Model I, III, 4, Pet, Atari. $89 cassette; $99 disk.

Physical Evaluation Program (P.E.P.) for a Healthy Heart. A management health program that provides a scientific method of assessing the physical conditions of students and enables you to prescribe and monitor progress. Teacher's guide, 20 student manuals, and audio cassette included. Apple, TRS-80 Model I, III, 4. $109.

Punctuation. The period, question mark, and exclamation point are taught and reinforced in Punctuation I, the comma in Punctuation II. An interactive-tutorial method is used to involve the student in the lesson. Graphics and sound. Apple, TRS-80 Model III, 4, C-64. $59 per disk; $109, two disks.

Read and Solve Math Problems #1. A tutorial and drill and practice program on math proficiency skills. Management System included. Includes program guide and 14 reproducible activity masters (grades 4-6; remedial secondary). Apple, TRS-80 Model III, 4, C-64, Pet. $89 cassette; $98 disk.

Regions of the United States. Teaches the major landforms, products, and climates of the different regions of the United States. Beginners quiz: identify the state; super quiz: identify state and spell the name correctly. Computer gives clues about the regions. Apple, TRS-80 Model III, 4, C-64. $59.

Salina Math Games. Drill and practice math games for levels 3-9 make learning math skills fun. For two players, the level of difficulty adjusts for each student as the game progresses. Management system tracks strengths and weaknesses. Apple, TRS-80 Model I, III, 4. $59 per disk; $98 for two disks.

Spaceship Lost. A tutorial early childhood program in game form aimed to develop spatial concepts. Based on work of Piaget. Excellent for special education. Includes management system. Apple. $59.

Sport Stat Basketball Statistics. A record keeping program that will allow the coach to follow the statistics on his players and team. Twenty category input; easy updating system. Speeds record keeping, sharpens knowledge and decisions. Apple, TRS-80 Model I, III, 4. $59.

Weather. A tutorial-interactive science program exploring the major elements of the weather, including temperature, humidity, and air pressure. Management system included. Includes program guide (grades 5-9). Apple, TRS-80 Model III, 4, C-64. $49.95.

Writing Competency Program. A highly motivating writing competency program designed to instruct the student in letter writing, report organization, and persuasion. A tutorial, drill and practice program for junior-senior high students. Includes program guide. Apple, TRS-80 Model III, 4, C-64. $69 cassette; $79 disk.

Fliptrack Learning Systems

How to Operate the Adam Family Computer System. Interactive audio tutorial teaches word processing with built-in SmartWriter, Basic programming, tape storage, and file management. Two audio cassettes, quick reference guide. Coleco Adam. $29.95.

How to Operate the Apple II+. Interactive audio tutorial covers operating commands, system utilities, keyboard. Uses Apple system master disk. Three audio cassettes, operator's guide. Apple.

How to Operate the Apple IIe. Audio tutorial for the first-time computer user. Teaches keyboard, essential commands, disk and file management, more. Three audio cassettes, operator's guide. Apple IIe. $57.

How to Operate the Apple III. Audio tutorial teaches set up, keyboard, running programs, file and disk management,

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How to Operate the Atari 600XL and 800XL. Audio-cassette tutorial teaches color, sound, graphics, Basic programming, and use of Program Recorder. One data cassette, an audio cassette, and quick reference guide. Atari 600XL, 800XL. $19.95.

How to Operate the Commodore 64. Interactive audio-cassette tutorial teaches use of disk drive, printer and Commodore Datasette, Basic programming and more. One data cassette, two voice cassettes, quick reference guide. C-64. $29.95.

How to Operate the Franklin Ace 1000. Audio tutorial for the first-time computer user. Uses DOS disk for computer checkout, disk and file management. Three audio cassettes, operator's guide. Franklin Ace 1000. $57.

How to Operate the IBM PCjr. Audio tutorial teaches keyboard, color, sound, graphics, Basic programming, DOS 2.1 file and disk management, even batch processing. Includes use of printer and cassette tape storage. Two audio cassettes and quick reference guide. IBM PCjr. $39.95.

How to Operate the IBM Personal Computer. Interactive audio tutorial teaches disk storage and file management; formatting, copying, batch processing, Basic. Uses PC DOS 1.1 or 2.0. Three audio cassettes, operator's guide. IBM PC. $57.

How to Operate the IBM XT. Audio tutorial teaches file and disk management, directory trees, fixed disk use, batch processing, DOS 2.0 features, Basic and more. Four audio cassettes, operator's guide. IBM PC/XT. $75.

How to Operate the TI 99/4A. Interactive audio-cassette tutorial teaches system setup, keyboard, Basic programming, plus color, sound, graphics. One audio cassette and quick reference guide. TI 99/4A. $16.95.

How to Operate the Vic-20. Audio-cassette tutorial teaches color, sound, graphics, Basic programming, and use of Commodore Datasette. One data cassette, an audio cassette, and quick reference guide. Vic 20. $19.95.

How to Operate Your Computer Under CP/M. Interactive audio tutorial for the first-time user. Learn to format and copy disks, manage files, use shortcuts, and more. Three audio cassettes, operator's guide. CP/M. $57.

How to Operate Your Computer Under CP/M-86. Interactive audio tutorial covers disk and file management, formatting, copying, batch processing and more. Three audio cassettes, operator's guide. CP/M-86. $57.

How to Use AppleWriter. Audio tutorial teaches you to create and edit documents, save and print them. Use WPL for form letters, mailing lists, more. Three audio cassettes, user's guide. Apple. $57.

How to Use EasyWriter II. Audio tutorial teaches you to create, edit, save and print documents and much more. Includes use of *EasySpeller II.* Three audio cassettes and user's guide. For computers that run *EasyWriter II.* $57.

How to Use Lotus 1-2-3. Audio tutorial covers all commands as you build a model, then sort and use other database functions. Learn how to graph results. Four audio cassettes, lesson summary. For computers that run *Lotus 1-2-3.* $75.

How to Use Multiplan. Interactive audio tutorial shows you how to build a cashflow budget model as you learn commands. Learn sorting, linking worksheets, and more. Four audio cassettes, user's guide. For computers that run *Multiplan.* $75.

How to Use MultiMate. Audio tutorial teaches you to create and edit documents, format, merge and print them; use special format commands, and more. Three audio cassettes and user's guide. For computers that run *Multimate.* $57.

How to Use pfs:File, Report and Graph. Audio tutorial that teaches you to create forms, enter and retrieve data, modify forms, compile reports with calculations, graph data and more. Two audio cassettes, quick reference guide. For computers that run the *pfs:* series. $39.95.

How to Use SuperCalc. Interactive audio tutorial helps you build a cashflow model as you learn major commands and functions, answer "what if" questions. Four audio cassettes, lesson summary. For computers that run *SuperCalc.* $75.

How to Use the Home Accountant. Audio tutorial that teaches you to set up budget categories, enter transactions, reconcile checkbooks, graph results, print reports, and forecast trends. Two audio cassettes, quick reference guide.For computers that run *The Home Accountant* or *The Home Accountant Plus.* $39.95.

How to Use WordStar. Interactive audio tutorial teaches you to create, edit and print documents, using all important *WordStar* commands. Three audio cassettes, user's guide. For computers that run *WordStar.* $57.

How to Use WordStar MailMerge. Audio tutorial teaches you to create, edit and print documents, using all important *WordStar* commands, plus how to prepare form letters, mailing lists and more with *Mailmerge.* Four audio cassettes and user's guide. For computers that run *WordStar and MailMerge.* $75.

How to Use VisiCalc. Interactive audio tutorial teaches you to build a spreadsheet, answer "what if" questions. Learn essential commands and more. Four audio cassettes, lesson summary. For computers that run *VisiCalc.* $75.

Futurehouse, Inc.

Alphabet Construction Set. Teaches children the letters of the alphabet by using the Edumate light pen. Voice synthesis is included in the program. Requires Edumate light pen or joystick. C-64, Atari. $29.95.

Animal Crackers. Allows children to create a fanciful screen full of animated animals with an Edumate light pen or joystick. Children learn new words in no time. C-64, Atari. $29.95.

Bedtime Stories. Narrates the story of "Little Red Riding Hood." Voice synthesis is used to bring the story to life. Requires Edumate light pen or joystick. C-64, Atari. $29.95.

Computer Crayons. An electronic coloring book for your child to color. 26 different scenes and 8 colors to choose from. Requires an Edumate light pen or joystick. C-64, Atari. $29.95.

Generic Software

Game-Pac I. Number Rotation: player must find the next number (1-20) on terminal screen; nine difficulty levels. Ages 6 and up. Guns-Of-The-Alps: projectile shooting game, 1-2 players; choose shells and shooting angle to destroy enemy gun. CP/M, MS-DOS. $19.95.

World-Map. Introduction to world geography, explains the basic parts of earth: land, water, air. Major continents and oceans are presented by a graphic display

of the earth (grade 4 and up). CP/M: $19.95; MS-DOS: $29.95.

Gessler Educational Software

Anagramas Hispanoamericanos (Beginning, Intermediate, Advanced). Teaches and reviews names, capitals, and locations of countries of South America, Central America, Mexico, and the Caribbean. Map appears and student must unscramble anagram. Superb color graphics. Apple. $39.95.

Antonyms & Synonyms (French, Spanish and German versions). Two exciting games on one disk: "concentration" in the target language. One board for synonyms, another for antonyms (German has antonyms only). Can be played by two teams or two players to find pairs of words randomly hidden. TRS-80 Models I, III, 4. $29.95.

Apfeldeutsch (Advanced Beginning, Intermediate, Advanced). A comprehensive self-study course that teaches and reviews German vocabulary, grammar, reading, and listening comprehension. Consists of seven disks, six audio cassettes, German textbook, and English workbook. Text file allows you to create and print out your own texts. Apple. $195.

The Apple's Core. A software package that teaches how to use and program the Apple. Program disk contains 14 teaching modules; tutorial disk contains 11 corresponding lessons. Features an Easy-Type error-proof entry system that rejects incorrect entries. Apple. $49.95.

Camsoft German (Beginning, Intermediate). Contains 32 interactive programs. Reviews and drills vocabulary, grammar, verb conjunctions, and sentence construction. Has a text entry mode to allow you to enter your own material. Pet: $69; C-64: $79.

Cherchez la Difference (Intermediate, Advanced). Reinforces reading comprehension as it builds vocabulary. Student selects the one word out of four that does not belong to a particular category. Five games in ascending levels of difficulty. More than 2000 words. Apple. $24.95.

Computer-Assisted Learning Exercises for French (CLEF) (Beginning). A series of beginning disks that teaches and drills on many grammar and vocabulary topics such as articles, pronouns, verbs, adjectives, and so on. Each disk contains a dictionary and a grammar summary. Printed documentation. Pet. $29.95 per disk.

Copywrite (All Levels). A reading skills program built around technique of dismantling a text and having the reader restore it word by word. Teacher creates passage with easy-to-use text entry system. Chip required for inserting French, German, and Spanish accents. Pet. $49.95; chip: $29.

Crossword Magic (All levels). Create your own crossword puzzles like the pros. Add words from any language; program will automaticaly format them into a puzzle and store them, along with clues, on disk. Excellent for spelling and vocabulary. Apple, Atari, C-64. $49.95.

Deutsche Grammatik "Der-Die-Das" (Beginning, Intermediate). Reviews the use of the nominative, accusative, and dative cases, the declension of the definite article, and prepositions. Each of the three sections reviews grammar points and provides a drill with fill-in sentences. Complete documentation. Apple. $31.95.

ESL Picture Grammar (Beginning). Teaches basic grammar using color pictures to beginning ESL students. The pupil creates a sentence using a subject, verb and object, given a picture of a subject and an object, with verb and tense indicated. Contains 26 units. Apple. $49.95.

Familiar and Formal Commands. Part of a seven-part series that reviews many essential grammar topics. The student first reviews pertinent grammar rules, then does exercises with fill-in sentences. Help mode, error analysis, documentation included. Apple. $29.95; set: $215.

Future and Conditional Verb Tenses. Part of a seven-part series that reviews many essential grammar topics. The student first reviews pertinent grammar rules, then does exercises with fill-in sentences. Help mode, error analysis, documentation included. Apple. $39.95; set: $215.

French Achievement Test I, II and III (Intermediate, Advanced Levels). Three programs provide practice in preparing for the CEEB Achievement Tests. Each consists of multiple-choice questions with explanations. Apple. $49.95 each; set of three: $134.95.

The Great Creator. Enables you to prepare exams, drills, and homework problems quickly, easily, and creatively. Can be used for every class subject (contains accents for 17 different languages). Multiple-choice or fill-in questions. Apple. $299. Demo disk $5.

Introduction to Latin Vocabulary (Beginning, Intermediate). A program that teaches hundreds of Latin words and English cognates, numbers, Roman numerals, familiar phrases, endings, and so on. Text entry system allows user to add vocabulary words and create texts. Two disks. Apple. $32.95 each; set of two: $59.95.

La Carte de France (Intermediate, Advanced). Explores the various regions of France describing geography, history, industry, and culture of each region. A quiz follows each section; final exam reviews entire program. Color graphics. Apple. $47.95.

La Corrida de Toros (Beginning, Intermediate). A hangman game with hundreds of vocabulary words in different categories. Vocabulary review and matching exercise included. Bullfight scenario with excellent graphics. Test file enables you to enter your own words. Apple version has color. Apple, TRS-80 Model I, III, 4. $29.95.

La Guillotine (Beginners, Intermediate). Hangman game with hundreds of vocabulary words in different categories. Vocabulary review and matching exercise included. Guillotine scenario with excellent graphics. Text file enables you to enter your own words. Apple version has color. Apple, TRS-80 Models I, III, 4. $29.95.

The Linguist (All Levels). An interactive language translation program that can be used in French, Spanish, German, English, Russian, Hebrew, Japanese and/or any 13 other languages. You translate words/phrases in two languages. Apple, C-64, Atari, IBM PC & PCjr. $44.95.

Learn to Tell Time (French) (Spanish) (ESL) Version (Beginning). Help students learn and practice essential time-telling skills. The student is given drill practice in correctly writing and spelling different times, with sound and color graphics. Self-scoring program. Apple. $49.

Le Present et le Passé Composé. Reviews and provides examples on rules for forming these tenses; gives exercises with fill-in sentences. Incorrect responses thoroughly analyzed. Help mode. Scoring included. Complete printed documentation. Apple. $35.95.

Le Temple D'Apshai (Intermediate, Advanced). A fantasy role-playing game with hi-res color graphics and screen instructions in French. User explores magical temple. Motivates students to develop new vocabulary and sentence-building skills. Apple. $49.95.

Les Bâtisseurs D'Empire (Intermediate, Advanced). A science adventure/fantasy

using color graphics, animation, and sound effects. The name of the game is to colonize a planet. Enriches vocabulary. Includes bilingual manual. Apple. $37.95.

Mesaventures Culturelles. A French reading program that reveals cultural differences and similarities between Americans and the French, and asks students to determine the causes. Each question has multiple-choice answers, with each response generating additional information. Apple, TRS-80 Model I, III, 4. $37.95.

Mystery House (Advanced, Beginners, Intermediate). The player must discover who the murderer is by using the correct French commands to find clues and secret passages. An entertaining and challenging way to learn French expressions. Color graphics. Apple. $24.95.

Mots Croises et Mot Secret (Intermediate, Advanced). Hundreds of French crossword games to help students build their vocabularies. Clues are given. Includes secret word games that help vocabulary and spelling. Maintains score. Bilingual manual included. Apple. $24.95.

Numbers (French) (Spanish) (ESL) Version (Beginning). A game that teaches students to recognize and spell numbers. After using the learning mode, they try to get an animated figure to climb a ladder and jump into the pool by correctly spelling numerals. Sound, color graphics. Apple. $49.

Part II: The Seed. Teaches advanced methods of using and programming the Apple. Includes a program disk with 13 teaching modules and a tutorial disk with corresponding lessons. Instructional manual included. Apple. $59.95.

Poker Pari (French), **Poker Parat** (German), **Poker Listo** (Spanish). A culture game based on poker, with topics chosen at random from 14 subjects covering hundreds of questions on vocabulary, grammar, and history. Can be used as a game or quiz. Intermediate and advanced levels. Apple. $24.95.

Por vs. Para, Use of Definite Articles, Question Words. Part of a seven-part series that reviews many essential grammar topics. The student first reviews pertinent grammar rules, then does exercises with fill-in sentences. Help mode, error analysis, documentation included. Apple. $35.95; set: $215.

Present of, Regular/Irregular Verbs, Ser vs. Estar. Part of a seven-part series that reviews many essential grammar topics. The student first reviews pertinent grammar rules, then does exercises with fill-in sentences. Help mode, error analysis, documentation included. Apple. $39.95; set: $215.

Present Subjunctive of Spanish Verbs. Teaches and reviews subjunctive mood giving rules and examples. Exercises are given for each section, with useful feedback and help modes. Printed documentation includes all sentences. TRS-80 Model I, III, 4. $26.95.

Present Tense of Regular French Verbs (Beginners). Presents rules on how to conjugate the present tense of regular *-er, -ir* and *-re* verbs. Exercises given for each verb group. Help mode allows pupils to refer to rules while doing exercises. Complete documentation. TRS-80 Model I, III, 4. $26.95.

Preterite and Imperfect Verb Tenses. Part of a seven-part series that reviews many essential grammar topics. The student first reviews pertinent grammar rules, then does exercises with fill-in sentences. Help mode, error analysis, documentation included. Apple. $44.95; set: $215.

Preterite vs. Imperfect. Part of a two-part series that teaches and reviews difficult grammatical concepts. The rules for the grammar topic are first displayed, then exercises are given with fill-in sentences. Help mode, error analysis, documentation included. TRS-80 Model I, III, 4. $32.95; set: $59.95.

Questionmaster (All Levels). Authoring program that enables you to design your own teaching and testing programs such as question-answer dialogues, tutorial and translation exercises. Apple—French, German. Pet—French, German, Spanish (requires chip). Apple: $69; Pet: $55; chip: $29.

Savoir Écrire (Beginners, Intermediate). Vocabulary drill program in which students practice reading, writing, and understanding French vocabulary through pictures. Entire program is in French. 20 different units contain hundreds of words. Vocabulary list. Apple. $45.95.

Ser vs. Estar; Por vs. Para. Part of a two-part series that teaches and reviews difficult grammatical concepts. The rules for grammar topic are first displayed, then exercises are given with fill-in sentences. Help mode, error analysis, documentation included. TRS-80 Model I, III, 4. $32.95; set: $59.95.

Spanish Achievement Test I, II and III (Intermediate, Advanced Levels). Three programs provide practice in preparing for the CEEB Achievement Tests. Each program consists of multiple-choice questions with explanations. Apple. $49.95 each; set of 3: $134.95.

Spanish for the Traveler (Beginning, Intermediate). Starting with your arrival in Spain, seven units of vocabulary cover shopping, sightseeing, getting acquainted, dining, and so on. Drills provided with useful feedback and Spanish music. Includes four audio cassettes, bilingual manual. Apple, IBM PC. $59.95.

Spanish Word Order. An interactive program that teaches the linguistic patterns of sentences. Words appear out of sequence and student must unscramble them to form a sentence. Useful feedback given; review mode (beginner, intermediate, advanced) thoroughly reviews 16 grammar topics. Apple. $37.95.

Subjunctive of Verbs, Subjunctive with Clauses. Part of a seven-part series that reviews many essential grammar topics. The student first reviews pertinent grammar rules, then does exercises with fill-in sentences. Help mode, error analysis, documentation included. Apple. $44.95; set: $215.

Super Stumper (French, Spanish and German versions—all levels). In this variation of 20 Questions, you think of an object and the computer tries to guess what it is. The more you play, the smarter it becomes. Text entry system allows you to add your own categories. Apple. $34.95 each; set of three: $93.

Type-Writer: A Multi-Lingual Word Processor. A complete word-processing program that allows you to create, modify, and print text—with accents—in 11 languages. Prepare exams, quizzes, homework assignments, type reports and letters. Complete instruction booklet. Apple. $69.95.

Un Cours De Grammaire. Thoroughly reviews essential grammar topics such as savoir/connaitre, depuis/depuis que, quand/lorsque. Student workbook contains explanations, rules, examples, and exercises. Disk contains exams on all material covered. Apple. $46.95.

Use and Placement of Pronouns. Part of a seven-part series that reviews many essential grammar topics. The student first reviews pertinent grammar rules for direct and indirect objects, then does exercises with fill-in sentences. Help mode, error analysis, documentation included. Apple. $29.95; set: $215.

Word Attack! (French, Spanish, and German versions). An adaptation of the popular program for foreign language learning. Four exercises with hundreds of words and an exciting arcade game. Word list editor so that user can enter own vocabulary. Color graphics. Apple, IBM PC, C-64. $49.95.

Golden Egg Software

Primary Mathematics. Fast-moving, field-tested drill and practice routines; prints and saves scores; complements commonly used texts for K-1 grades. Includes teen numbers, odds and evens. Apple. $29.95.

Readiness. Includes creative color sketching with edit and print options. Programs teach colors, upper- and lowercase letter match, pattern sequence; record scores field-tested, enhances readiness curriculum. Apple. $29.95.

Innovative Programming Associates, Inc.

Computer Literacy—Business Applications. Demonstrates a variety of useful programs including income tax, mortgage, and college financial aid calculations. Also covers payroll, inventory, and sales reporting. Apple. $44.95.

Computer Literacy—Business Forecasting. Shows how the computer can be used to forecast future conditions based on past and current trends. Concludes by allowing the user to make projections for a hypothetical business. Apple. $36.95.

Computer Literacy—Computer Graphics. Provides a comprehensive introduction to computer graphics. Deals with both hi-res and lo-res graphics and their many applications. Game paddles or joystick helpful. Apple. $44.95

Computer Literacy—Computer Simulation. Guides the user through training, educational, and financial situations. Also includes interactive simulations in which the user makes decisions affecting the outcome. Apple. $36.95

Computer Literacy—The Computer as a Calculator. Shows how the computer can be used to perform calculations ranging from simple arithmetic functions to more advanced topics such as trigonometry and combined functions. Apple. $29.95

Computer Literacy—Introduction to the Computer. A basic foundation module covering the use of the keyboard and the operation of computer system components. Introduces the user to computer terminology and theory, and brief historical background. Apple. $44.95.

Computer Literacy—The Printer. Reviews the purpose of a printer and describes the varieties available. Demonstrates various forms of output, specific applications and graphics. Available to run on Epson printer. Apple. $36.95.

Computer Literacy—Statistics. Illustrates, in a non-technical and easy to understand manner, how the computer can be used to perform statistical calculations. Includes: permutations and combinations, probability, mean-median-mode, regressions. Apple. $29.95.

Computer Literacy—The Uses of a Database. Shows the advantages of using a computer to store and sort information. Discusses what is needed to create a database and allows the user to create his own database. Printer helpful. Apple. $44.95.

Power of Words—Volume I. A computerized vocabulary-building game that makes it possible for secondary school students through adult to develop a strong and vital vocabulary on their own. Apple. $79.95.

Speed Reading—The Computer Course. Designed to develop the reading skills needed to double (at least) your reading speed while increasing comprehension on all types of reading material. IBM PC, Apple. $125.

Insoft Inc.

Wordtrix, Quotrix, and **Mystrix.** Educational, fun software that targets ages 10 to grandparents. Lock horns with the computer to test word skills, memories, and powers of deductive reasoning. IBM PC, XT & PCjr, Apple. $34.95.

Instant Software, Inc.

Geography Explorer: USA and **Geography Explorer: Europe.** Essential geographic facts are presented in an entertaining manner along with practical features, such as lesson planning suggestions. TRS-80 Model I, III. $49.95.

Music Teacher. A two-part package. Learn all the complexities of sheet music and train your ears to hear musical tones. TRS-80. $19.95.

Russian Disk. Learn Russian easily with this comprehensive language course. Learn to recognize the letters of the Cyrillic alphabet and practice pronouncing Russian words. TRS-80 Model I, III, Apple. $29.95.

Triangle Trig. A step-by-step guide to Triangular Geometry and Beginning Trigonometry that reviews all necessary mathematical skills. Abundant graphics and careful explanations. TRS-80 Model I, III. $19.95.

Typing Teacher. A seven-part tutorial allows you to advance at your own speed, providing plenty of space for practice without wasting paper. This program is a patient teacher. TRS-80 Model I, III, 100, Color Computer. $17.95 cassette; $22.95 disk.

Video Speed-Reading Trainer. Trains you to recognize letters and numbers quickly so that you will begin to read whole phrases at a glance. TRS-80 Model I, III. $14.95.

Instructional/Communications Technology, Inc.

Cloze-Plus Program. Reading development program that develops comprehension skills and vocabulary through structured cloze and context analysis activities for reading levels 3-8. Apple. $150 set.

Comprehension Power Program. Reading development program that inductively improves comprehension and study skill strategies through preview skimming and comprehensive reading practice. Apple. $150 set.

PAVE: Perceptual Accuracy/Visual Efficiency Training. Program for development of foundational visual/functional and perceptual skills that form the basis for fluent silent reading. Consists of scanning and flashing activities involving numbers and letters. Apple. $80.

Processing Power Programs. Reading comprehension programs for reading levels 1-6 (both elementary and mature interest) that provide perceptual processing training which develops the ability to recognize, store, and use visual impressions during reading. Apple. $180 set.

Reading Around Words Program. Program for reading levels 4-12 that develops and expands word knowledge through structured context analysis strategies and multiple exposure to words. Apple. $150 set.

Word Memory Programs. Word recognition activities with level one vocabulary from major basal reading series, as well as I/CT's beginning reading vocabularies for elementary and secondary/adult students. Apple. $65.

Integrity Software

Alphabite. Game for preschool through first grades to strengthen alphabet skills. Move the Alphabiter around the screen to find the matching letter or complete the sequence. Pleasant music and large colorful characters. Joystick required. C-64. $13.95 tape; $16.45 disk.

Chopper. Thrilling addition, subtraction, multiplication division drill. Three levels of play for each drill. Free the Choppers by correctly answering problems. Great sound and sprite graphics (grades 1-4). C-64. $22.95 cassette; $25.45 disk.

Climb Time. Animated addition and subtraction learning game for preschool and kindergarten children. Animated problems give children a clear visual representation of math problems. Vic 20, C-64. $12.95 cassette; $15.45 disk.

Math Bash. Exciting addition and subtraction drill. Destroy a brick wall by correctly answering math problems. Four levels of play. Great sound and graphics (grades 1-2). Vic 20. $12.95 cassette; $15.45 disk.

Math Bash II. Exciting multiplication and division drill. Destroy a brick wall by correctly answering math problems. Four levels of play. Great sound and graphics (grades 3-4). Vic 20. $12.95 cassette; $15.45 disk.

Sammy the Spelling Spider. Animated hidden word spelling game for all ages. Spell the hidden word before Sammy does. Create your own lists of words for specific problems or even in different languages. Vic 20, C-64. $13.95 cassette; $16.45 disk.

Intelligence Quest

ABC Caterpillar. The child, controlling a bright green caterpillar, searches the screen for the letters of the alphabet that are passing by. The goal is to find and gobble them up in alphabetical order (ages 3-8). C-64, Vic 20. $16.

Divex. Challenges a child's ability to handle the basic concepts of multiplication and division. Three levels of multiplication and three levels of division (ages 8-12). Atari, C-64. $16 cassette; $21 disk.

J & S Software

Heartbeat/heartbeat/heartflow. An award winning tutorial about the heart for ages 11 to adult. Program includes animated blood flow, heartsaver game, tutorials, glossaries, illustrated subject reference and more. Apple. $39.95.

The Apple Grade Book, Version 2.6. A grade recording system for teachers handling 40 grades per student and 80 students per class. Grades can be weighted, listed by student name, or coded I.D. All data saved on copyable disks. Apple. $34.50.

The Vocabulary Game—Junior level. A high-resolution baseball game based on almost 1000 vocabulary words. Helps students increase their vocabulary. Easy to add words, change words, and delete scores (grades 5-9). Apple. $29.50.

The Vocabulary Game—Senior level. Designed to help students improve their vocabulary and prepare for the SAT exam. Contains a bank of 1000 words and uses a high-resolution baseball game format for motivation (grades 10-12). Apple. $29.50.

Kern International

Graphics for the IBM PC, Graphics for the Apple, Graphics for the Z-100. A collection of programs in Basic for 2-D and 3-D graphics. Forms a complete self-teaching guide that shows you how to write your own graphics software quickly and easily. Full documentation in the book. Disks contain the programs. IBM, Apple, Z-100. $21.50 disk; $28.50 book.

The Learning Line

Look 'n Hook. For beginning readers ages 4-8. 10 crossword-style puzzles on two disks teach a 24-word vocabulary of phonetically regular words such as cat, cap, jet, and pen. Music and color graphics. No keyboard—plays with joystick, paddles, or touchpad. Apple. $39.95.

The Learning Company

Addition Magician. An absent-minded magician makes a game out of learning addition. Magical walls and secret prizes encourage flexible thinking about adding. Children become addition magicians (ages 6-10). Apple. $34.95.

Bumble Games. By playing with Bumble, a friendly character from the planet Furrin, children learn fundamental math skills. Children learn to plot numbers and even create their own computer graphics. Apple, Atari, $39.95.

Bumble Plot. While trapping robbers and discovering underwater treasure, children learn advanced math skills. Children learn to create computer graphics by plotting positive and negative numbers on increasingly complex grids (ages 8-13). Apple. $39.95.

Colorasaurus. A brand new type of coloring book for young artists. Children learn about colors, hues, and matching. Colorful dancing dinos. A catchy beat. A volcanic world. Children will color all day with this game (ages 3-6). Atari. $29.95.

Gertrude's Puzzles. In the animated world of Gertrude, the go-getter goose, children develop abstract thinking skills. Children solve complex puzzles using colors and shapes. They can even design playing pieces with the graphic editor (ages 6-adult). Apple. $44.95.

Gertrude's Secrets. Children develop logical thinking skills in the animated world of Gertrude, the go-getter goose. Children learn to categorize and recognize patterns while solving playful puzzles. They can even create their own puzzle pieces (ages 4-10). Apple. $44.95.

Juggles' Rainbow. While playing with dancing rainbows, butterflies, and windmills, children can develop reading and math readiness skills. In colorful, delightful games, children learn spatial concepts like "above" and "below", "left" and "right." Even a pre-reader can learn to use a computer (ages 3-6). Apple, C-64. $29.95.

Magic Spells. Sharpen spelling skills in an adventure world of castles, demons, and wizards. Children spell and unscramble words with 14 word lists. Players can tailor the game to any level by creating their own lists (ages 6-10). Apple, IBM, Atari. $34.95.

Moptown Hotel. In seven increasingly challenging games children test hypotheses, use analogies and develop strategic thinking skills. Children arrange Moppets in Moptown's fantasy world. A sequel to Moptown Parade (ages 9-adult). Apple, IBM, Atari. $39.95.

Moptown Parade. A progression of seven playful games designed around colorful Moppet characters teach logic, strategy development, and pattern recognition.

Children arrange and match Moppet characters in the imaginary world of Moptown (ages 6-10). Apple, IBM, Atari. $39.95.

Number Stumper. A compellingly clever way to think about numbers. Children develop abstract reasoning and strategic thinking skills by adding and subtracting. Clicking dice and a pot o' gold charm children ages 6-10. Apple. $39.95.

Reader Rabbit and the Fabulous Word Factory. A new approach to teaching prereading skills to tots. Children help Reader Rabbit sort three-letter words, label boxes and load words onto word trains (ages 5-7). Apple. $39.95.

Rocky's Boots. In a program that appeals to nine-year-olds yet challenges adults, you can learn the basics of logic and computer circuitry. Play 39 different games or create your own with the unique editor (ages 9-adult). Apple. $49.95.

Word Spinner. Reading resembles a ride in an amusement park as children spin through the alphabet and learn to read. With brilliant colors and a whirling word spinner the building blocks of reading are made easy (ages 6-10). Apple. $34.95.

The Learning Seed

101 Misused Words and How to Use Them Correctly. A menu of commonly confused and misused words (accept/except, affect/effect, than/then, and so on) is offered. Receive help and practice in problem words. Apple, TRS-80. $37.

Fast Food Micro-Guide. A computerized analysis of a fast food meal. Select a meal from the menu of a fast food franchise and receive an onscreen or printed analysis of its nutritional strengths and weaknesses. Apple, TRS-80. $36.

What Did You Eat Yesterday? A diet analysis program that is easy to use and contains foods most people eat. Print-out option or onscreen diet evaluation based on latest food composition values. Apple, TRS-80. $39.

Snackmaster: A Nibbler's Dilemma. A game in which players strive to select lowest calorie food from a series of 10 "temptations." Simulates real life snack choices—educational and fun. Apple, TRS-80. $36.

Learning Well

Body Awareness. Three separate activities for learning parts of the body. For independent use by preschool and kindergarten children. Apple. $49.95.

Comprehension Skills Library. Set of 10 comprehension and reading skills games, Covers: main idea, drawing conclusions, context, fact or opinion, details, cause and effect, sequencing, inference, following directions, and alphabetizing. Apple. $499.50.

Fantasy Land—Reading Between the Lines. Comprehension and reasoning skills are necessary to retrieve the "Sword of Justice." For 1 to 6 players. Apple. $49.95.

Galaxy Search—Predicting Outcomes. A critical thinking game for 1 to 6 players as they search the galaxy for NASA's missing robot parts, analyze events, and predict the outcome. Apple. $49.95.

Jungle Rescue Spelling. One to six players attempt to use their helicopters to rescue monkeys from fire. As they play, they must spell words correctly. Apple. $49.95.

Knowing Numbers. Three individual activities for preschool to kindergarten. Teach matching of numbers and objects; greater than, equal to and less than concepts; and addition and subtraction. Apple. $49.95.

Letters And Words. Three individual gaming activities teach young children alphabetizing; upper and lowercase matching and sight word reading. For independent use by preschool to kindergarten children. Apple. $49.95.

Magic Castle—Vocabulary Building. One to six players work their way to the top of the Magic Castle by answering vocabulary questions. Includes 185 words. Apple. $49.95.

Space Math. Practice addition, subtraction, multiplication and division as one to six players try to prevent the Zorlyns from landing on Earth. Apple, Atari. $49.95.

That's My Story—Creative Writing. Creative writing program for individual and group writing. Offers 12 story starters. Editing and printing options. Apple. $59.95.

Logical Systems, Inc.

QuizMaster. Educational and informational program and game. Multiple choice questions and answers are displayed. Scoring based on accuracy and speed. With three files of 100 questions each. You can add your own question files. TRS-80 Model 1, III, 4. $39.

UltraTrek. An advanced logic game intended for the serious game player. You are constantly under duress because the enemy is attacking your ship and supply bases. TRS-80 Model I, III, 4. $15.

Magnetic Harvest

Planetmaster. Thought-provoking ecological simulation. Endangered alien species with complex biological needs must be preserved in an intricate and unusual sanctuary. A humane, constructive learning experience. Copyable and listable. Apple & compatibles, Basis 108. $24.95.

MCE Inc.

Analyzing An Ad. Program describes the purposes of advertising and presents a method for students to analyze the meanings of ads, methods used to get specific audiences to purchase products. Students can also develop their own advertisements and obtain a printout. Apple, Franklin. $44.95.

Comparative Buying Series. Defines comparative shopping, provides information, provides experience in the application phases. The programs: Buying Wisely, Understanding Sales Buying, Becoming an Informed Shopper and Cash Versus Credit Buying; can be purchased separately. Apple, Franklin. $165.

Financing a Car. Program provides necessary information to evaluate various car purchases and the options of this purchase. An evaluation printout available. Apple, Franklin. $44.95.

Home Safe Home. Program includes four disks to help students identify and deal with the home hazards of fire, falls, poison. Presented at three reading/conceptual levels from second to fifth grade accessed through branching based on student responses. Apple, Franklin. $165.

Income Meets Expenses. Includes the basics and practice in concepts of budget, income and expenses, needs and wants, fixed and unfixed expenses, categorizing income. Summary of what to do if expenses exceed income in a budget. Apple, Franklin. $340.

Job Readiness—Assessment and Development Series. Includes information to assist

learners in obtaining a job. Programs include: Job Readiness Attitude Assessment, which assesses work attitudes and presents consequences to student choices; Filling out Job Applications; Successful Job Interviewing; Resources for Job Hunting; can be purchased separately. Apple, Franklin. $165.

Job Survival Series. Students learn what to expect on their first job and learn behavior appropriate for job success: using an experiential approach, students select jobs; are presented situations; make decisions; and are presented the probable consequences of their decisions. The three programs: Personal Habits for Job Success, Work Habits for Job Success, First Day on the Job. Apple, Franklin. $119.95.

Learning Improvement Series. Topics covered: Improving Your Memory, Effective Study Skills, Following Written Directions, and Strategies for Test Taking. Can be purchased separately. Apple, Franklin. $165.

Managing Your Time. Designed at two educational levels (fifth to sixth and second reading levels but secondary interest level) accessible through teacher control. Designed to help change time-wasting habits and enable students to develop productive daily schedules. Apple, Franklin. $44.95.

Money Management Assessment and Development. Assesses four critical areas in money management skills—vocabulary, money management, calendar and money symbols—and the math skills required to compute money management problems. Apple, Franklin. $165.

Poison Proof Your Home. Program includes five disks covering four major kinds of poisons and ways poisons get into the body. Presented at three reading/conceptual levels from second to fifth grade assessed through branching based on student responses. Apple, Franklin. $210.

Problem Solving in Everyday Math Series. Instruction in solving math word problems while effectively reinforcing the principles of problem solving. Includes four programs that can be purchased separately. Apple. $165.

You Can Bank On It. Shows students how to open accounts, execute banking paperwork, maintain their accounts and more. Includes practice experience in check writing and keeping the account balanced. Apple, Franklin. $285.

Media Basics, Inc.

Return-to-Reading Courseware Programs. Microcomputer courseware for reading motivation, basic literature and skills development—fully responsive, interactive programming for individualized instruction and systematic grading. Apple, TRS-80, Pet/Commodore. Price on request.

Microcomputer Workshops Courseware

Algebra Series. Series consists of six disks: Equations, Quadratic Equations, Factoring Algebraic Expressions, Binomial Multiplication, Graphing Linear Functions, and Simultaneous Linear Equations. Apple. $150.

Basic Math Skills Series. Series consists of four disks: Addition With Carry; Subtraction; 1-, 2-, 3-Digit Multiplication; and Long Division. Highly interactive. All errors flagged and explained. Screen used as a worksheet. Apple, Commodore, TRS-80, Atari. $99.80.

Capitalization Plus. Program covers all capitalization rules and generates thousands of problems. An interactive teaching program that can adapt itself to most students' levels (grades 5-12). Apple. $39.95.

Decimal Series. Series consists of four individual disks: Adding Decimals, Subtracting Decimals, Multiplying Decimals, and Dividing Decimals. Highly interactive. All errors are flagged and explained. Apple. $90.

English Achievement Series. Series consists of five individual disks (English Achievement I, II, III, IV and V) which cover the various forms of the English Composition Achievement exam. Apple, TRS-80, IBM: $175. Commodore: $125.

Fraction Skills. Series consists of four individual disks: Adding Fractions, Subtracting Fractions, Multiplying Fractions and Dividing Fractions. All errors are flagged and explained. Screen used as a worksheet. Apple, Atari. $80.

French Achievement Series. Series consists of three individual disks (French Achievement I, II, III), which cover the various forms of the French Achievement Exam. Includes explanation of each option and an analysis when done. Apple. $49.95 per disk.

Sorting Techniques I & II. Series consists of two disks (Sorting Techniques I & II) that address the needs of the computer science teacher. All sorts are demonstrated graphically. Apple. $24.95 per disk.

Spanish Achievement Series. Series consists of three individual disks (Spanish Achievement I, II, III), which cover the various forms of the Spanish Achievement exam. Explanations of each option with full analysis after a session. Apple, $49.95 per disk.

Microdigital

Math Tutor. Teaches addition, subtraction, multiplication, and division at any level. Complete step-by-step solutions are displayed. The package includes four machine language programs, plus a tutorial manual. Vic 20. $14.95.

Micro Lab

Classroom Administrative System. Produce exams with questions from the database, choosing questions individually, in groups, by difficulty factor, by searching. Maintain gradebook for up to 800 students. Valuable for teachers. Apple. $300.

English and Math SAT. Use to study for the SAT test or just for studying general English and math. Programs have instruction and test modes and help screens attached where applicable. Apple, IBM, C-64, Adam. $30.

The Learning System. Highly flexible system for teaching and testing by computer. Create Multiple-Choice, Fill-In, or Column Match preceded by an instructional paragraph. A test and tutorial mode. Apple. $75.

U.S. Constitution Tutor. For junior high, high school students, and adults taking citizenship tests. Covers legislative, executive, and judicial branches. Study by topic or level. Apple, IBM, Atari, C-64, Adam. $30.

Micromedia Software

Watchwords and Wordisk Maker. Climb-The-Pyramid spelling game. Students recognize then select and/or type correct spelling. Up to 900 words per disk; no limit to disks created with Wordisk Maker. Apple, IBM PC, C-64. $34.95.

Micro Vision

Mathematical Programming Package II. MPP II implements simplex and transportation algorithms. Can solve about 100 x 100 size problems. Menu driven programs. Fully prompted with true editing capabilities. Results displayed or printed in a comprehensive format. IBM PC, & compatibles. $89.

Milliken Publishing/ EduFun! Division

EduFun! Learning Games. Each package contains two programs that teach important educational skills through game formats. Apple, Atari, C-64, IBM PC. $32.95.

Mindscape

Computer Literacy. Interactive disk and textbook series for grades 5-12. Three levels: People Using Computers, Computer Applications, and Concepts of Programming Basic. Covers all areas of computer literacy. Apple. $90-$120.

Minnesota Educational Computing Consortium

Business Education

Business Education Volume 1 - Utilities. A collection of practical programs: interest on installment buying; effects of simple and compound interest, loan amortization, business financial reports, money supply, payroll, and the 1040A tax form (senior high-adult). Apple. $45.

Business Education Volume 2 - Payroll. Provides experience in creating data files for a hypothetical company payroll. Equipment requirements include dual disk drive and a printer (grades 9-12). Apple. $46.

Business Education Volume 3 - Accounting. Provides realistic experience with a computerized accounting system. The package consists of four integrated systems: general ledger, accounts payable, accounts receivable, and inventory control (grades 9-12). Apple. $49.

The Electronic Spreadsheet - Revised Edition. With this revised version, students learn how to do anything they would normally do on the traditional accountant's worksheet—without an eraser. To be used with *VisiCalc*. (grades 9-12). Apple. $49.

Computer Literacy/ Computer Science

Apple Assembly Language. Contains six utility programs to aid the beginning or advanced assembly language programmer. A standard assembly language textbook or reference book should be used in conjunction with these materials (advanced programming). Apple. $49.

Experiencing Procedures. Designed to be a student's first introduction to computer programming. Learning to organize a program into a set of procedures not only introduces good program design but also good problem-solving skills (grades 6-9). Apple. $36.

Extensions to Applesoft Basic. Contains the programming utility EBasic—a machine language program that adds new features and commands to AppleSoft Basic (intermediate-advanced programming). Apple. $43.

EZ Logo. Provides children at the primary level (ages 4-8) the opportunity to use the computer in self-directed ways. With a simple set of one-letter commands, children can control the computer and explore its capabilities (preschool-grade 3). Apple. $48.

Files on the Apple. Consists of a student text, an answer key, and a disk. The topics covered include: use of Apple II sequential files, random access files, and binary files (high school-college). Apple. $50.

The Friendly Computer. Keyboard and Zebug introduce students to location of keyboard keys; Term Worm graphically displays major components of a computer system; Picture allows students to create drawings; and Picture Show displays the drawings (primary). Apple. $48.

Introduction to Applesoft Basic. Presents a series of tutorials for teaching or reviewing the concepts of elementary level Applesoft Basic programming. Topics covered: system commands, PRINT and END, variables and assignments, graphics, etc. Apple. $38.

Loops. The FOR/NEXT and READ/DATA statements are explored in this looping program. The module is divided into two lessons and includes handouts and transparencies (grades 6-9). Apple. $36.

Mouse in the Maze. How would you tell a mouse to find its way through an unfamiliar maze? Students with only an introductory knowledge of Basic can now write sophisticated maze-solving algorithms (grades 7-12). Apple. $43.

Processing Words. Introduces the elementary concepts of word processing to students. The classroom computer is used to enter, edit, and format text material with this program. (Grades 6-9). Apple. $36.

Programmer's Aid Volume 1. Fifteen utility programs help to add a professional touch to your Applesoft programming and facilitate manipulating binary and text files (intermediate-advanced programming). Apple. $45.

Programmer's Aid Volume 2. Master, one of the six programs, produces characters on the hi-res graphics screen; Graphic Tablet allows production of shape tables; Disk Editor is a binary program as is Sort, and GR to HGR. Hex/Dec is number six (intermediate-advanced programming). Apple. $48.

Programming Special Projects. Students are taught a variety of programming commands which will increase their ability to use the computer for problem solving. Programs using HTAB, VTAB, and GOSUB are introduced as well as string manipulation (grades 6-9). Apple. $36.

The Three R's of Microcomputing (The Glass Computer). The most basic functions of input, output, and processing information correspond to the traditional three R's—reading, writing, and arithmetic. With this module, teachers can begin teaching the Basic language (grades 6-9). Apple. $36.

Shape Tables. Twelve shape table files (hi-res graphics) on this disk contain 187 preformed shapes that can be incorporated into your programs (intermediate-advanced programming). Apple. $45.

Foreign Language

Getting Ready to Read and Add (French Version). Enables French-speaking children to enjoy this popular nine-part prereading and counting package. Children learn letter recognition, consonant identification, concentration plus three arithmetic programs (preschool-grade 2). Apple. $45.

Spanish Language Math Practice. Eleven widely-used elementary math drills and educational games (grades 2-6). Apple. $45.

Teaching Assistant (French Version). Multiple-choice, true-false, or short answer exercises in any subject area or grade level can be designed for French-speaking students, or exercises can be tailored for students learning French as a foreign language (elementary-adult). Apple. $43.

Teaching Assistant (Spanish Version). Multiple choice, true-false, or short answer exercises in any subject area or grade level can be designed for Spanish-speaking students, or exercises can be tailored for students learning Spanish as a foreign language (elementary-adult). Apple. $43.

Fine Arts

Art - Perspective Drawing. A sequential and self-paced instruction. Introduces the study of one- and two-point perspective (grades 7-12). Apple. $44.

Music Theory (Beginning-Advanced Music Students). Eighteen music theory programs combine Apple graphics and sound for drill and practice on music fundamentals: terms and notations, rhythm, pitch, intervals, scales, and chords. Apple. $49.

Health and Home Economics

Elementary Volume 13 - Nutrition. Elementary students can analyze their food intake and activity level with these simplified but powerful computer programs. Manual contains: a 142-item food list, 144-item activity list, food and diary forms, and recording sheets (grades 5-6). Apple. $46.

Food Facts. Cereals, Chemicals in Foods, Fast Foods, Food Graphs, and Vitamins provide a valuable resource for students in health maintenance. For use in science, home economics, and health classes (junior high-adult). Apple. $45.

Health Maintenance Volume 1—Facts. Four programs—Energy Needs, Heart Attack, Nutrients-Nonnutrients, and Toxicity—provide a valuable resource for health maintenance and can be used by students individually or in small groups (junior high-adult). Apple. $45.

Health Maintenance Volume 2—Assessment. One of the two programs, Health Hazards, relates how lifestyle affects health. Ideal Weight uses an individual's skinfold measurements to provide a more accurate ideal weight range than provided by height and weight tables (senior high-adult). Apple. $45.

Nutrition Volume 1. To help students learn the importance of a balanced diet, Food Intake Analysis performs a quick, accurate nutritional analysis of food consumed by an individual in a 24-hour period (grade 7-adult). Apple. $46.

Nutrition Volume 2. Aids understanding of food composition and the function of nutrients in body processes and activities (senior high, college, adult). Apple. $45.

Language Arts

Elementary Volume 2—Language Arts (Logic, Spelling, Vocabulary). Seven programs generate crossword puzzles, mazes, scrambled word games, timed spelling tests, and a program, Talk, which introduces young children to the computer by having them carry on a conversation with it (grades 1-6). Apple. $46.

Elementary Volume 5—Language Arts (Prefixes). Lessons and drills on the five most commonly used prefixes—un-, re-, dis-, pre-, and in-—are presented in a format that rewards young learners and encourages the development of language and keyboard skills (grades 2-5). Apple. $45.

Elementary Volume 7—Prereading/Counting. A unique primary disk containing nine programs that add fun and magic teaching prereading skills (preschool-grade 2). Apple. $46.

Elementary Volume 11—Language Arts (Phonet). Allows a student to work through a set of predetermined phonetic exercises in sound associations, affixes, syllables, contractions, and homonyms (grades 1-6). Apple. $43.

Elementary Volume 12—Language Arts (SIMS). Uses four different programs to deliver practice on more than 500 words from the Systematic Instructional Management Strategies (SIMS) reading curriculum available through the Minneapolis Public Schools (grades 1-6). Apple. $43.

English—Parts of Speech. A no-nonsense, individualized approach to help students diagnose their proficiency in the traditional parts of speech (senior high-adult). Apple. $49.

Spelling Volume 1—Primary. Use any one of 20 pre-stored spelling drills or compose one. Each question consists of a sentence with a missing word and a list of three possible answers. The correct answer is chosen by typing its number (grades 1-6). Apple. $44.

Spelling Volume 2—Secondary. A sentence containing a missing word is presented, and the student selects the correct answer from three choices (junior high-adult). Apple. $45.

Writing a Character Sketch. The second in a series of courseware packages for the creative writing class. Students are guided by example and comprehension questions to write about a personal, fictional, or historical character (grades 9-12). Apple. $43.

Writing a Narrative. In Idea Storming One-Two-Three, students learn a story-starting technique; Catch The Moments focuses on key narrative elements, while Point Of View encourages students to make a conscious choice about the voice of the narrator (grades 7-9). Apple. $43.

Mathematics

Adventures With Fractions. Students learn two methods of ordering unlike fractions in interactive tutorials incorporating graphics and animation. The common denominator approach and the cross products method are both presented (grades 5-8). Apple. $45.

Aestheometry. Art and mathematics students of various ages can explore curve sketching using the graphics of the Apple to see step-by-step how curves are generated (grade 3-college). Apple. $48.

Automotive Technician Mathematics Vol. 1—Whole Numbers & Fractions. Whole Numbers and Fractions teach the application of the four basic operations through detailed example problems, practice exercises, and a test. English or metric units can be specified for whole number problems (jr. high-vocational school). Apple. $44.

Automotive Technician Mathematics Vol. 2—Decimals & Percents. Both programs, Decimals and Percents, provide detailed worked examples, randomly chosen practice exercises, and a test of 10 randomly selected problems. The English or metric measurement system can be used (jr. high-vocational school). Apple. $44.

Computer Generated Mathematics Materials Volume 1—Problem Solving. Teacher utility package can be used to make worksheets or tests for an individual student or for an entire class. Printer required. Apple. $45.

Computer Generated Mathematics Materials Volume 2—Problem Solving. Worksheets or tests can be made with this product covering: approximation and estimation, purchasing, money, division and multiplication, and picture and equation. A printer can be used with this package (grades 3-8). Apple. $45.

Early Addition. Focuses on whole number addition normally taught in first and second grade. Included are: Surprise Package, Build an Airplane, Balloon Shoot, Create a Creature, Fire Fighter, and Frog Race (grades 1-2). Apple. $44.

Elementary Volume 1—Mathematics (Games and Drills). Games of logic and drills on basic facts and the metric system for grades 3 and 4 make up the 11 programs on this disk (grades 3-5). Apple. $45.

Elementary Volume 4—Math/Science (Ecology, Astronomy, and Arithmetic). From "estimations" to "constellations," this package has a wide range of use in mathematics and science. Programs include: Odell Lake, Odell Woods, Estimate, Math Game, Solar Distance, and Ursa (grades 2-6). Apple. $49.

Elementary Volume 7—Prereading/Counting. A unique primary disk containing nine programs that add fun and magic to teaching pre-reading and counting skills (preschool-grade 2). Apple. $46.

Elementary Volume 8—Geometry (Points and Angles.) The tutorial lessons have been designed to cover two concepts: type of the quadrilaterals; areas and perimeters. The computer presents geometric shapes along with textual information. Apple. $43.

Elementary Volume 9—Geometry (Lines and Triangles). Each of the four programs provides a tutorial setting to teach the concepts of geometry. Each lesson has a tutorial, a quiz, and student handouts. Programs are: Lines, Quiz on Lines, Triangles, and Quiz on Triangles (grades 4-6). Apple. $44.

Elementary Volume 10 — Geometry (Quadrilaterals—Area and Perimeter). The first program is a tutorial drill on geometric definitions, while the second leads in a step-by-step process the development of formulas for calculating perimeters and areas of triangles and quadrilaterals (grades 4-6). Apple. $45.

Graphing. Shows how ordered pairs are used in creating computer graphics. The module, divided into three lessons, includes four programs, handouts, and transparencies (grades 6-9). Apple. $36.

Growgins' Fractions. Colorful graphics introduce students to concepts in ordering fractions with like denominators or like numerators in two interactive tutorials. Fractions are explored as parts of a whole (grades 5-8). Apple. $45.

Mathematics Volume 1 (Graphing, Logic, and Equations). Eight programs focus computer power on central concepts in secondary mathematics: coordinate geometry, algebra, and logic. Programs include: Slope, Polygraph, Polar, Algebra, Bagels, Snark, Radar, and ICBM. Apple. $46.

Mathematics Volume 2—Measurement (Going Metric). Graphics and animation spark interest in this series of nine programs on the English measurement system. Students learn to convert between units in measuring liquids, lengths, time, and weights (junior high). Apple. $45.

Mathematics Volume 3—Geometry (Formulars, Shapes, and Skills). Plane geometry concepts are covered in this unit of five sequentially-arranged programs. Student worksheets and reference material are contained in the manual. (junior-senior-high). Apple. $45.

Mathematics Volume 4—Advanced. Thirteen programs provide powerful tools for students in calculus, finite math, and linear algebra. Science and social science students can use this to determine a least squares approximation to a set of experimental data (senior high-college). Apple. $49.

Mind Puzzles. In Mazes of Rodentia, students apply a variety of logical thinking skills while participating in a maze tournament. Queen Bee of Menta uses symbols and characteristics arranged in order to duplicate a given pattern (grades 4-7). Apple. $44.

Number Systems. Students gain an understanding of the binary, hexadecimal, and octal number systems. Apple. $36.

Probability. Three programs illustrate the large number and multiplication principles of probability. The computer can easily simulate probabilistic events, producing the outcome within seconds. (grades 6-9). Apple. $36.

Problem-Solving Strategies. Diagonals and Squares teach the strategies of Trial and Error, Exhaustive Listing, and Symplifying the Problem. Thinking With Ink, which needs a color television, and Pooling Around offer additional mental challenges (grades 5-9). Apple. $48.

Spanish Language Math Practice. Eleven widely used elementary math drills and educational games (grades 2-6). Apple. $45.

School Utilities

Basketball Statistics (Coaches). Maintains a file of records for each game your team plays. A highlight of the package is the creation of printed graphs to compare individual or team performance. Apple. $44.

Data Handler. A simple, flexible, user friendly, data entry/retrieval system that allows you to build, modify, retrieve, store, and print data. Equipment requirements: 48K Apple, two disk drives, and a printer. Apple. $49.

Grade Manager. A powerful and highly flexible computer grading package for the classroom teacher. Percentage and curve grading in a variety of grading methods can be used. First-time users are guided step-by-step. Apple. $46.

Health Immunization Record Keeping (Administrative). Developed in cooperation with the Minnesota State Department of Health. Can ease the work of professional or nonprofessional staff in recording and maintaining the immunization data required for students. Apple. $43.

School Utilities Volume 1—Projections. Designed to assist school administrators in projecting revenues, salaries, and enrollments. Printer required. Apple. $45.

School Utilities Volume 2—Readability. Computer can be used to analyze a text sample quickly to obtain a readability level. Six methods can be selected: Spache, Dale-Chall, Fry, Raygor, Flesch, and Gunning-Fog. Apple. $45.

Science

Oh, Deer! Based on a real-life model. Challenges students to manage a herd of white-tailed deer in Whitetail Hollow, a residential area. Decisions to be made are: herd size in relation to natural environment and human tolerance (grades 5-9). Apple. $44.

Science Volume 1—Biology/Physics. Simulations on a wide variety of topics are presented ranging from population dynamics of a buffalo herd to the Milliken Oil Drop Experiment. Other programs describe isotopes, atomic weight, vectors,

radioactive decay, etc. (junior/senior high). Apple. $45.

Science Volume 2—Biology/Physics. Biology topics include cell membrane diffusion and environmental effects of pesticides. Physics topics include momentum and kinetic energy, radioactive decay, light wave refraction, and diffusion rates of gases (junior/senior high). Apple. $45.

Teacher Utilities Volume 1 (Puzzles and Tests). Nine programs to enable teachers to design posters and puzzles or to create their own tests and drills. Apple. $46.

Wrestling Statistics (Coaches). Maintains a file of records for each of your team's meets. A highlight of the package is the easy entry of move points (by letter) directly from the scorebook. Apple. $43.

Training Manuals

Designing Instructional Computing Materials. Organized for teaching five, three-hour sessions. Designed to assist classroom teachers in developing a single program rather than large development projects. Apple. $70.

New Classics Software

Advanced Placement Pascal 80. Highly interactive Pascal compiler, excellent for teaching or learning Pascal, used in hundreds of schools. Includes five manuals, two disks, recommended text, two years free upgrade support and a license for single campus duplication. Apple II, Kaypro, Morrow, Epson, TRS-80 Models I, III, 4. Osborne. $279.

Orange Cherry Media

A Day To Find Out. The daily responsibilities of four exciting occupations give students an enjoyable, but informative way to learn. Students participate in making important decisions. Apple, TRS-80, Pet, Atari, C-64. $67 disk; $56 cassette.

Active Reader—World Of Nature Series. Students take an active role in reading about high-interest topics. Reading becomes fun and easy. Students improve reading skills while becoming familiar with computers. Apple, TRS-80, Pet, Atari, C-64. $67 disk; $56 cassette.

Addition And Subtraction Of Whole Numbers. Designed to help youngsters develop basic math skills in an effective way. Immediate feedback and reinforcement are provided with different levels to motivate students. Apple, TRS-80, Pet, C-64. $67 disk; $56 cassette.

Adventures Around The World. Fascinating reading series helps students develop their reading skills. Students actively participate in the adventures with the computer acting as a friendly guide. Questions monitor comprehension. Apple, TRS-80, Pet, Atari, C-64. $67 disk; $56 cassette.

All About Dinosaurs Computer Set. Fascinating, high-interest program presents the dinosaurs of prehistoric times in an unusual manner. Through computer graphics, the sizes and shapes of the giant reptiles are compared. Apple, TRS-80, Pet, Atari, C-64. $34 disk; $28 cassette.

Alphabee. Provides youngsters with a fun way to use the alphabet. Letters move across the screen in random order and you must pick them up in alphabetical order. Colorful and exciting. Apple, Atari. $30 disk; $25 cassette.

Balloon Bandit. An exciting, educational game that challenges both math skills and verbal abilities. A skill level option. Excitement in playing while learning. Apple, Atari. $30 disk; $25 cassette.

Banker's Run. Complete with music, sound effects, and color graphics, this program will delight youngsters of all ages while challenging them mathematically. Apple, Atari. $30 disk; $25 cassette.

Basic Language Skills. Students learn the parts of speech through definition and examples. They can create funny stories and poetry. From a list provided by the student, the computer creates a story. Apple, TRS-80, Pet, Atari, C-64. $84 disk; $70 cassette.

Beginning Math Concepts. A set of easy to use programs covering number concepts through intensive drill and structured activities. A choice of levels, plus motivational drills, games, and activities. Apple, TRS-80, Pet, C-64. $67 disk; $56 cassette.

The Cloze Technique. Series contains four exciting stories. Students are instructed to read passages through to the end before answering questions, thereby stimulating an active thought process. Apple, TRS-80, Pet, Atari. $34 disk; $28 cassette.

Division of Numbers. Set of four programs provides plenty of drill and practice for the student learning division. Apple, TRS-80, Pet, C-64. $67 disk; $56 cassette.

Earth Science. Provides a practical approach to earth science, which explains the effects of nature on our world and our lives. Apple, TRS-80, Pet, C-64. $67 disk; $56 cassette.

Fairy Tales For The Primary Grades. Each program in this set is made of three class stories with questions and activities to check student comprehension. Students can read and work at own pace. Apple, TRS-80, Pet, Atari, C-64. $34 disk; $28 cassette.

Government In The United States. Students get an interesting and informative look at the workings of government at all levels. Areas covered include: Congress, courts, committee activities, lobbying and caucusing. Apple, TRS-80, Pet, Atari, C-64. $67 disk; $56 cassette.

Great American Folk Heroes. All the myths, fables, and legends come to life as students explore America's greatest folk tales. The folklore and history of all parts of the U.S. are presented. Apple, TRS-80, Pet, C-64. $67 disk; $56 cassette.

Identity 500. An exciting, educational game that teaches the students the fundamentals of math identities and number relationships. Students have fun while learning. Apple, Atari. $30 disk; $25 cassette.

Intermediate Math Skills. Provides an effective review of intermediate math skills and a quick appraisal of student's level of understanding. Enjoyable activities help reinforce concepts and pinpoint problem areas. Apple, TRS-80, Pet, C-64. $67 disk; $56 cassette.

Introduction To Geography. Two-part program uses the hi-res color graphics of the Apple computer to provide an introduction to geography in two parts: The States and Mapping The World. Apple. $30 each disk; set $50.

Learning About The Holidays. Self-paced, interactive programs that not only present the holidays but also illustrate the use of the calendar. Children learn history as well as the social significance of major holidays. Apple, TRS-80, Pet, Atari, C-64. $67 disk; $56 cassette.

Math Arcade Games. Three educational games using mathematics skills and finger dexterity; students must first make a math calculation and then use dexterity to get full credit for their choices. Apple, Atari. $50 disk; $42 cassette.

Math For The Young Consumer. A usable, practical computer series that involves students in using math skills to solve situations confronting the consumer. Relevant story situations immediately involve the student. Apple, TRS-80, Pet, Atari, C-64. $67 disk; $56 cassette.

Mathworld Commander. Features four math skill levels, multiple-screen color graphics with special sound effects. Apple, Atari. $30 disk; $25 cassette.

Multiplication Of Whole Numbers. Set of four programs provides plenty of drill and practice for the student learning multiplication. Apple, TRS-80, Pet, C-64. $67 disk; $56 cassette.

Painless Punctuation. A total learning program—covers fundamentals of various areas of punctuation. The computer helps students quickly locate the rule that covers a particular written situation. Apple, TRS-80, Pet, C-64. $67 disk; $56 cassette.

Solving Word Problems In Math. This series teaches the student the skills of reading and understanding the math problem. Demonstrates how to isolate certain key words and translate the solution into verbal form. Apple, TRS-80, Pet, Atari, C-64. $67 disk; $56 cassette.

Space Mission Problem Solving. Series is two-part: Journey To The Moon and Journey To Mars. Weight, volume, rate, time and distance are some of the types of math problems covered in this intriguing series. Apple, TRS-80, Pet, Atari, C-64. $34 disk; $28 cassette.

Spelling. Emphasizes commonly misspelled words. Teachers can select words for each grade 2-6. Students are taught the correct spelling and recognition of misspelled words. Apple, TRS-80, Pet, Atari, C-64. $34 disk; $28 cassette.

Strange Encounters. The four phenomena explored in this program have been the subject of much debate and curiosity. Students read and analyze the evidence on both sides and make decisions as to what they think. Apple, TRS-80, Pet, Atari, C-64. $67 disk; $56 cassette.

Super Quiz Kid. One or two players can test their knowledge of people, events in the U.S., and world history on the computer. Degrees of difficulty from third grade level to adult. Apple, TRS-80, Pet, Atari, C-64. $67 disk; $56 cassette.

Telling Time. Explains how to tell time in simple terms—no easy task. The students have fun learning about clocks and how to tell time. Apple, TRS-80, Pet, Atari, C-64. $34 disk; $28 cassette.

Time Machine Traveler. Students get to learn and "feel" what it was like to live during four exciting episodes in history. They are asked to decide how they would have handled actual situations according to history. Apple, TRS-80, Pet, C-64. $67 disk; $56 cassette.

Using Money and Making Change. An effective, practical use of the capabilities of the computer to teach the value of coins and currency to younger students who also learn how money is used to pay for things and what change to expect. Apple, TRS-80, Pet, Atari, C-64. $50 disk; $42 cassette.

Vocabulary Builders. Vocabulary building skills are introduced, explained, and reinforced through review questions and games. Students do various activities, which expand their skills in analyzing word meanings. Apple, TRS-80, Pet, Atari, C-64. $67 disk; $56 cassette.

The Weather Science Set. Examines the major factors that affect climate, the basic vocabulary of weather observation, and the instruments used to trace weather patterns. Apple, TRS-80, Pet, Atari, C-64. $34 disk; $28 cassette.

Word Factory. Computerized learning module in which students are shown how to unlock the meanings of hundreds of new words by recognizing word patterns. Included are suffixes, prefixes, and contractions. Apple, TRS-80, Pet, C-64. $67 disk; $56 cassette.

Word Ranger. The students must "rescue" stranded words and must decide if the word is a noun, verb, adverb, or adjective. Contains a list of 25 words for game play; however, list may be changed to suit a teacher's needs. Apple, Atari. $30 disk; $25 cassette.

Working With The Alphabet. Designed to introduce the young student to the alphabet as well as the microcomputer (K-3). Apple, TRS-80, Pet, Atari, C-64. $34 disk; $28 cassette.

Writing Fundamentals. Students not only learn basic writing skills, but also put them to immediate practical use in imaginative writing assignments. Covers: description, writing sentences, paragraphs and letters. Apple, TRS-80, Pet, Atari, C-64. $67 disk; $56 cassette.

Peachtree Software, Inc.

Algebra—Volumes 1-4. A sequence of independent volumes that make up a first-year course in algebra. Each volume available separately. Covers principal concepts and equations solving in a step-by-step sequence with a flow chart format. Volumes 1 and 2 available for IBM PC. Apple, Franklin Ace. $39.95 per volume.

Algebra—Volume 5 & 6. A combined volume set; covers irrational numbers, radical expressions, finding square roots, quadratic equations, and quadratic inequalities. Apple, Franklin Ace. $49.95.

Compu-Math Arithmetic Skills. Arithmetic skills help children establish a strong foundation in basic math concepts. Uses positive reinforcement where correct responses advance a learner and repeated errors bring review. Concentrates on counting, addition, subtraction, multiplication, division. Apple, Franklin Ace. $49.95.

Compu-Read. Powerful tool for improving reading speed, recall, and test-taking skills. Works with you, adjusting to individual skills and giving detailed feedback on progress. Covers letters, synonyms and antonyms, words and sentences. For classroom or individual use. Apple, Franklin Ace, Atari. $29.95.

Compu-Spell System. Builds spelling skills through positive reinforcement. Tracks and maintains records for up to 60 individuals, displays spelling words in sentence context, records 11 most recently misspelled words. Draws from this list to remediate learning. Apple, Franklin Ace. $29.95.

Compu-Spell Data Disk—Adult/Secretarial. For use with *Compu-Spell System,* covers words most commonly misspelled in business and everyday usage. Purchased separately. Apple, Franklin Ace. $19.95.

Compu-Spell Data Disks—Grades 4-8. For use with *Compu-Spell System*. Data disks are purchased separately and contain word lists for grades 4-8 (up to 1200 words per disk). See *Compu-Spell System* description. Apple, Franklin Ace. $19.95 each.

Decimals. Builds and reinforces learner's mathematical skills. An animated figure cues the learner's attention to individual components of the equation or concept shown on the screen, breaking down the process into steps. Covers addition, subtraction, multiplication, division, percentage, conversion. Apple, Franklin Ace, Atari. $49.

Fractions. Builds and reinforces mathematical skills. Animated figure cuts attention to individual components of the equation or concept shown on the screen, breaking down the process into steps. Covers definitions of parts of fractions, addition, subtraction, multiplication, and division. Apple, Franklin Ace, Atari. $49.

Hands On Basic Programming. Self-instructive 200-page workbook and "hands on" software make it easy to learn to design, code, and debug your own programs. Only a basic knowledge of math required. Its tracking screens and special displays let you watch as the computer executes your programs. Apple, Franklin Ace. $79.

Introduction to Counting. For ages 4-8, this program explores block counting, subtraction, moving circles, water height, comparing lengths and widths, shapes, addition. As games are played, performance is recorded for parental review. Apple, Franklin Ace, Atari. $39.95.

Perception Games. Challenges your visual judgment and sharpens your eye-hand coordination with seven exciting games: Shape Memory, Visual Discrimination, Star Trace, Size Comparison, Falling Line, and Tilt Maze. Level of difficulty may be adjusted and scores kept. Apple, Franklin Ace. $29.95.

PSAT Word Attack Skills. Tutorials that give you an edge in mastering vocabulary, deciphering new or unfamiliar words, and taking tests. Prepares you for the antonyms portion of the PSAT, with each word carefully selected for its frequent appearance on the test. Apple, Franklin Ace. $49.

Rendezvous. Designed by a research scientist at the Cal Tech Jet Propulsion Lab. Simulates a space shuttle flight from liftoff through orbital rendezvous, to docking with a space shuttle. Tests math judgment and perceptual skill. Apple, Franklin Ace. $39.95.

SAT Word Attack Skills. Tutorials that give you an edge in mastering vocabulary, deciphering new or unfamiliar words, and taking tests. Prepares you for the antonyms portion of the SAT, with each word carefully selected for its frequent appearance on the test. Apple, Franklin Ace. $49.

Spelling Bee Games. A word and letter play which builds young children's spelling and reading readiness skills. Four colorfully animated games exercise a young child's eye-hand coordination, memory skills, sense of proportion, and motor skills (ages 5-10). Apple, Franklin Ace, Atari. $39.95.

Spelling & Reading Primer. Hi-res graphics capture the attention of young children and make learning the basis of spelling, reading, and computer operation fun and easy. Displays three separate objects and a single word. Simply tap the spacebar to select object that matches the word. Apple, Franklin Ace. $39.95.

Statistics. Provides teachers, university students and scientific and technical professionals with the means to quantify and evaluate mathematical relationships. Six calculation routines covered in depth. Apple, Franklin Ace. $29.95.

PMI, Inc.

Animated Arithmetic. Teaches arithmetic using animated color graphics and sound. Suitable for young children 3 and up or for pupils in remedial classes. Teaches using pictures and sound only. Apple, Vic 20. $10.95.

Master Math. A high school level math program that can be sold as a complete set on six disks or cassettes or individually. Comes with support material. Consists of algebra, geometry, trig, and many other subjects. Apple, C-64, Vic 20, Pet, CBM 8032, Sinclair/Timex. $150; $30 each.

The Ruler. An elementary school level program that teaches children the basics of using a ruler. C-64, Pet. $8.95.

State Capitals. An elementary school level program that teaches the state capitals. May also be converted to a multiple choice program. C-64, Pet. $8.95.

Rainbow Computing, Inc.

Daisy Professional. Statistical analysis including: Mathematical and Time-series Transforms, Descriptive Statistics, Correlations, Nonparametric Statistics, Hypothesis Testing, Regression Analysis. Apple. $199.95.

Salamander Software

French Tutor. A comprehensive tutor which tests vocabulary, phrases and idioms, and irregular verbs. Supplied complete with 1000 word vocabulary, 50 phrases, and five verb sets. Allows user to create own tests too. Dragon 32, TRS-80 Color Computer. £9.95.

Salamander Graphics System. An advanced picture-drawing system that works in all modes and color sets. Features: Text on hi-res screens (any size), library facility, cassette storage of pictures, help menu, detailed manual. Dragon 32, TRS-80 Color Computer. £9.95.

Turtle Graphics. An educational graphics package based on the concepts of the Logo computer language. Features library facility and powerful substring handling. Educational and fun for all ages. Dragon 32, TRS-80 Color Computer. £9.95.

Scarborough Systems, Inc

MasterType. A fun-filled and exciting game of basic and advance typing instruction. Apple, Atari, C-64: $39.95. IBM PC: $49.95.

Phi Beta Filer. The first file and list management software program specifically created for home and family use. Apple, IBM PC, C-64. $49.95.

Songwriter. Makes composing music at the computer easy, fun, and educational. Apple, Atari, C-64: $39.95; IBM PC: $49.95.

Sierra On-Line Inc.

Learning With Fuzzywomp. A collection of four educational games developed for prereaders. Basic skill focus includes pattern matching, counting, number sequencing, and creative play. The Fuzzywomp character acts as tutor, guiding children through the selection menu. Apple, C-64. $29.95.

Learning With Leeper. A collection of four award-winning educational games developed for prereaders. Basic skill focus include shape matching, counting, eye-hand coordination, and creative play. The Leeper character acts as tutor, guiding children through the selection menu. Apple, Atari, C-64, Coleco. $29.95 disk; $34.95 cartridge.

Wizard of Id's—Wiztype. Developed to teach computer keyboard skills. Johnny Hart's famous cartoon characters, the Wizard of Id and Spirit, make *Wiztype* not only instructive but downright fun. Apple, C-64, Atari, IBM PC, PCjr. $34.95 disk; $39.95 cartridge.

SimSoft, Inc.

Type & Learn. Typing instruction software that combines learning about computers

with learning to type. Includes beginning, intermediate, and advanced typing. Calculates right/wrong score and WPM speed. IBM PC, XT, & PCjr. $49.95.

Softron, Inc.

Quick Touch Typing. Teach yourself typing—by yourself! Step by step. Easy to follow lessons even kids will love. We make you type fast. You actually watch your speed increase with every drill. C-64, IBM PC, & PCjr, Apple, Atari. $24.95 disk.

Software Entertainment

Electronic Playground. Early learning program that includes matching of shapes, upper- to lowercase letters, and numbers. Hi-res drawing with picture catalog for saving. Apple. $24.95.

Southern MicroSystems for Educators

Accumulator II. Designed for the educator. Tailor this program to meet your needs for filing, retrieval of student information. You create the necessary categories. Apple. $175.

Distinctive Feature Analysis—DFA. A valuable (but time consuming) system of analyzing articulation patterns and providing efficient treatment for the clients of the speech-language pathologist. Apple, TRS-80. $395.

PIAT Error Analysis Report—P.E.A.R. Diagnostic and instructional planning of information is provided on four subtest areas of the PIAT—mathematics, reading recognition, reading comprehension, and spelling. Apple, IBM PC. $395.

Stanford-Binet Computer Report. Generates a comprehensive psychological report based on the student's performance on the Stanford-Binet Intelligence Scale. TRS-80 Model III, 4. $295.

Unistar I Pre-IEP Report. Designed for children with learning disabilities and those children who are high risk but not labeled. Goals and objectives are printed. Apple, TRS-80 Model III, 4, IBM PC. $350.

Unistar II Pre-IEP Report. An expanded version of *Unistar I.* Also includes a comprehensive set of goals and objective for life skills abilities and senior high level IEPs. Use at all grade levels with learning disabled, educable mentally handicapped, or high risk students. Apple, IBM PC. $695.

WAIS-R. Facilitates interpretations of the Wechsler Adult Intelligence Scale-Revised by performing routine calculations and comparisons of scaled scores. Apple, TRS-80 Model III, 4, IBM PC. $495.

WISC-R. A six-page report of interpretations: factor levels; comparisons with achievement; strengths, weaknesses; checking signs for brain injury; schizophrenia; emotional disturbance, behavior disorders and recommendations. Apple, TRS-80 Model III, 4, IBM PC. $495.

Woodcock Reading Mastery Test Error Analysis Report—W.E.A.R. Designed to provide a comprehensive error analysis of a student's performance. Charts provide additional diagnostic information. Apple, IBM PC. $395.

Space-Time Associates

Air Nav Workshop. A fully customizable navigational simulator for Apple computers. More than a higher education—it's fun. Apple, Franklin. $40.

Spectrum Software

Coins: Know Your Money. Students observe coins from pocket change and learn about presidents, famous buildings, mottos, mint marks, engraver's initials, and metallic composition. TRS-80, Apple. $18; with optional coin set $26.

Dinosaurs: Scary Giants of the Past. Graphics illustrate the structure and size of 15 dinosaurs. Simple questions are asked to help children learn about the appearance, diet, and behavior of the dinosaurs. Teacher's guide included. $37.

Metrics: Measuring Distances. The metric units of length are compared with our money system. With meter tape provided, student measures part of his body and geometric figures on screen. A review test is included. Apple. $28.

Rocks: Properties and Uses of Minerals. Students observe and test 18 rock samples to discover their properties. The computer then asks questions so the students can identify the rocks and learn their uses. TRS-80, Apple II. $18; with rock kit and testing materials $35.

Teeth: Animal Skulls and Human Teeth. Students observe five skull study cards to discover the structure and function of incisors, canines, and molars. Graphics help children learn about the care of their own teeth. Teacher's guide included. TRS-80, Apple. $38.

Spinnaker Software Corp.

Aegean Voyage. You must navigate your ships to find the hidden treasures on Greek islands while being careful to avoid monsters. Atari, C-64. $39.95.

Aerobics. A physical fitness program that has 18 different routines and 70-80 different exercises which can be custom-tailored to your specific needs and schedule. Atari, Apple, IBM, C-64. $44.95.

Alf in The Color Caves. Help Alf wriggle safely through the color caves past the Wufflegumps. Atari, C-64. $39.95 cartridge.

Bubbleburst. You must stop the pesky Zeboingers from spoiling Soapie's bubble bath fun. Atari, C-64. $39.95 cartridge.

Facemaker. Lets children create and animate faces on the screen. Atari, Apple, IBM, C-64, ColecoVision. $34.95 disk and cartridge.

Fraction Fever. You hop along on your pogo stick searching for correct fractions so that you may ride up on the Fraction Elevator. Educational arcade game. Atari, Apple, IBM, C-64, ColecoVision. $34.95 disk and cartridge.

In Search of The Most Amazing Thing. Players use strategy and learning skills to discover the location and identity of the Most Amazing Thing. Atari, Apple, IBM, C-64. $39.95 disk.

Jukebox. A musical strategy game that combines the strategy of a chess game and the excitement of a dance contest. Atari, C-64. $39.95 cartridge.

Kids on Keys. A three-part learning game that uses letters, numbers and pictures to introduce children to the computer keyboard. Atari, Apple, IBM, C-64. $29.95 disk; $34.95 cartridge.

Kidwriter. Children create the scene for a story and then write the words to it. Apple, C-64. $34.95 disk.

Kindercomp. A collection of six delightful exercises that allows children to start learning on the computer. Atari, Apple, IBM, C-64. $29.95 disk and cartridge.

Ranch. In Ranch, you create and animate Wild West scenes. Atari, C-64. $39.95 cartridge.

Snooper Troops I & II. A series of educational mysteries. Players are private detectives trying to determine who committed the crime and what the motive was. Atari, Apple, IBM, C-64. $44.95.

Trains. Puts you in charge of an old-time railway empire; whether the railway business succeeds or goes bankrupt is up to you. Atari, Apple, IBM, C-64. $39.95.

Sunburst Communications, Inc.

Arrow Dynamics: The Programming Game. Reinforces programming basics and promotes logical thinking. The object is to move an arrow across a gameboard to one of two goals by using programming statements. Obstacles, prisms and mirrors, puzzles and competition produce a creative challenge. Apple, TI 99/4A. $49.

Blazing the Basic Trail: If-Then Strategies. Develop logical thinking while learning key programming concepts. You must arrange statements into a program so that when it is run, an initial set of differently colored blocks or shapes is transformed into your targeted color or shape. Can be played alone or competitively. $49.

Challenge Math. An alien space intruder, a lovable dinosaur-like creature, and a mysterious mansion entice students into practicing basic arithmetic operations. Apple, C-64. $49.

Code Quest: Strategies in Problem Solving. Students sharpen thinking skills as they try to break a series of secret codes that reveal clues to the identities of mystery items. A special feature allows students to stop and return at a later time to complete a code and to enter their own codes and clues. Apple. $49.

Color Keys: Strategies in Problem Solving. A thought-provoking game that improves student's command of analysis, synthesis and problem solving strategies. Students must use a color key which shows that two colors may be substituted for a third in order to "color in" answers to problems. Apple. $49.

Counters: an Action Approach to Counting and Arithmetic. Lively graphics and musical beeps help young students learn to count. Groups of objects are counted first by the computer, then by the student. The program builds in difficulty, and is easy for young students to use. Apple. $49.

Discover: A Science Experiment. As the country's top scientist, your specialty is the study of strange new life forms. A recent space probe has just brought back several new creatures. Your job is to keep the life forms alive as long as possible. Your skills depend on your ability to form and test hypotheses and collect data. Apple. $49.

Discrimination, Attributes and Rules: The Second Step. Sequel to *Memory: The First Step in Problem Solving.* Includes: a framework within which the teaching of problem solving can be approached; problem solving activities that can be taught in the classroom; complete activities to reinforce learning. Offered in three packages. Apple. $225.

Explorer Metros: A Metric Adventure. Exciting space colony simulation offers double educational benefits: teaches metric estimation skills with a space-adventure game format; introduces students to computer logic through step-by-step editing instructions for creating game variations. Apple. $49.

Exploring Logo. Activity cards help you to discover the intrigue of Logo programming. Learn how to create graphics, work with words, lists and sentences, use sound and music, do computations and design group activities. Apple, Commodore. $39.

The Factory: Strategies in Problem Solving. Unique, three-level problem solving program challenges students to create geometric "products" on a simulated machine assembly line of their design. They develop inductive thinking skills and integrate skills in visual discrimination, spacial perception, logic, efficiency and understanding sequence. Apple, Atari, C-64, TRS-80 Color Computer. $49.

Fun House Maze: Strategies in Problem Solving. Students develop and test problem solving strategies as they try to discover the most direct route out of a 3-D maze. Random generation of patterns provides an endless variety of challenging mazes. Apple. $49.

Getting Ready to Read and Add. Sound, color and animation help young students identify and match shapes, upper- and lowercase letters and numbers. Imaginative graphics entice even young primary students. Joystick or paddle optional. Atari. $49.

The Incredible Laboratory: Strategies in Problem Solving. Students learn problem solving skills as they mix crazy chemicals to produce colorfully vivid monsters. Each chemical produces a specific feature of the monster—scaly body, mummy legs, one eye. Students must discover through trial and error the effect of each chemical. Apple, Atari. $49.

The King's Rule: Mathematics and Discovery. Students try to discover numerical rules to work their way into a king's castle. Presents three numbers; by generating and testing a work hypothesis and trying out new number combinations, students must determine the rule behind the sequence of numbers. Apple. $49.

Learning Through Logo. A beginning step-by-step discovery of Logo commands and procedures. A series of color-coded activity cards, student logs, and teacher's guide designed to develop specific problem solving strategies. A disk of activities, from mazes to maps on the screen, reinforces the concepts presented on the cards. Apple. $49.

Magic Slate: The Word Processor That Grows With You. Transforms your Apple into an easy-to-learn word processor that makes editing a pleasure. Grows with your students, so that it is equally appropriate for a first grader or a senior high student. Two separate guides—one primary, one advanced—and a teacher/parent guide are included. Apple. $65.

Managing Lifestyles: Survival Math Skills. An extension of the award-winning *Survival Math.* Three new simulations, The Calorie Counter, Comparison Shopping and Budget for Success, strengthen basic math skills by involving students in using mathematics in everyday situations. Apple, TRS-80. $49.

The Math Connection. Three challenging math games give students practice in basic computation and opportunities for creative thinking. In Great Robot Race, students determine the remainder in short division problems. In Computo and Super Computo, students analyze the relationships between addends, sums, factors and products. TRS-80 cassette or disk. $49.

Meet the Computer: Beginning Basic. Color-coded activity folders give hands-on experience at learning Basic programming statements and commands. Apple, Atari, IBM PC, Pet, TRS-80. $29.

Meet the Computer: Intermediate. Color-coded activity folders provide easy to follow instructions on how to use random numbers, special functions, arrays, varying input forms, graphics. Apple, Pet, TRS-80. $35.

Memory: the First Step in Problem Solving. Students improve problem solving skills in this teacher developed/tested total curriculum package. Includes: a skills ma-

trix that delineates a hierarchy of problem solving skills and teaching strategies, coordinated with 10 skill building disks. Offered in 3 packages. Apple. $250.

Missing Links: Classics, Old and New. Passages from Hemingway, Thurber, Shakespeare, Frost, Freud, Solzhenitsyn, Orwell and many others. Solutions depend upon educated guesses drawn from students' knowledge of language structures. Filling in the patterns of missing letters improves vocabulary, syntax, and writing mechanics. Apple, Atari, IBM PC, TRS-80. $49.

Missing Links: English Editor. Enables you to tailor the game to your students' interests and needs by entering passages of your own choice. Solutions depend upon educated guesses drawn from students' built-in knowledge of language structures. Apple, Atari, IBM PC, TRS-80. $59.

Missing Links: French Editor. Sample passages and easy-to-follow instructions show you how to input passages of your own choice in French. Solutions depend upon educated guesses drawn from students' built-in knowledge of language structures. IBM PC. $59.

Missing Links: German Editor. Sample passages and easy-to-follow instructions show you how to input passages of your own choice in German. Solutions depend upon educated guesses drawn from students' built-in knowledge of language structures. IBM PC. $59.

Missing Links: Micro Encyclopedia. A potpourri of factual information—from ice cream, elephants and airplanes to bicycles, sharks and whales—makes up this language puzzle. Filling in the patterns of missing letters improves vocabulary, syntax, and writing mechanics. Apple, Atari, IBM PC, TRS-80. $49.

Missing Links: Spanish Editor. Sample passages and easy-to-follow instructions show you how to input passages of your own choice in Spanish. Solutions depend upon educated guesses drawn from students' built-in knowledge of language structures. IBM PC. $59.

Missing Links: Young People's Literature. Passages from nine classics of children's literature. Solutions depend upon educated guesses drawn from students' built-in knowledge of language structures. Filling in the patterns of missing letters improves vocabulary, syntax, and writing mechanics. Apple, Atari, IBM PC, TRS-80. $49.

Odd One Out. Develops students' classification skills through five programs: Pictures, Words, Numbers, Math Problems. Advanced color graphics, animation and sound intrigue students into recognizing, identifying and classifying patterns and relationships. Includes teacher editing feature. Apple. $49.

Polynomial Practice Using Tiles: Discovering Algebra. High quality color graphics give students practice identifying and combining terms of polynomials. Starts with basic classification problems, then moves to exercises in adding, subtracting, multiplying, and dividing polynomial terms. Apple. $49.

The Pond. A small, green frog, lost in a pond of lily pads, helps your students learn to recognize and articulate patterns, generalize from raw data, and think logically. Three programs with increasing complexity and exceptional color graphics. Apple, Atari. $49.

The Professional Sign Maker. Produces high quality graphic letters for signs, overhead transparencies, ads. Signs may contain up to eight lines of text, each up to 80 characters in length. Letters can be 1, 2, 4, and 8 inches high, allowing space for descenders. Various shadings and a large variety of borders are available. Apple. $59.

Robot Probe: Your First Programming Experience. Students learn to think logically in this computer literacy game that uses a pseudo language to introduce students to programming. Students must use logic to program a robot (who only understands certain commands) to complete a mission. TRS-80 cassette or disk. $49.

The Self-Instructional Management System (SIMS). A unique program in which students can achieve success in self-directed learning. Includes assistance in planning, scheduling, recording daily progress and tracking learning attitudes. Gives continued feedback to the student. Allows teacher to monitor each student and correct his records. Apple. $195 two disks.

Semcalc: The Word Problem Solver. Innovative program teaches students how to approach and solve word problems. Uses bananas, oranges, and dinosaurs rather than numbers to help students focus on the essence of a problem: the objects and their relationships. Apple, Atari, TRS-80. $95.

Solving Equations and Inequalities: Discovering Algebra. Students work with a scale and algebraic equations to decide how many coins are hidden in a bag. Begins with a simple scale, then shows how balance picture problems help solve equations and inequalities. Apple. $49.

Spectrum: Patterns and Programs. Helps students follow the logic of simple programs and write their own. Challenges students to determine a hidden pattern of color bars with as few clues as possible; then they must reproduce the pattern by entering their own pattern program. Apple, TI 99/4A. $49.

Storybooks of the Future: Better View a Zoo. Story-poem adventures about a search for jungle animals introduces six learning activities and games. Focus is on number and letter identification, counting and the concepts of up/down and right/left. TRS-80. $39.

Storybooks of the Future: Space Waste Race. The mission of transporting waste to the moon entices students into five learning activities and games. Develops skills in counting and identifying numbers, letters, and directions. TRS-80 cassette or disk. $39.

Supermath. Four exciting games develop math and problem solving skills. Fabled Fifteen, Number Magic, No-No Negative and Prime Sequence help students find order and discover relationships between numbers by identifying patterns and sequences. TRS-80 cassette or disk. $49.

Survival Math: Simulations. Intriguing simulations require students to use math skills to make sound judgments. Situations such as shopping, making travel plans, building a playroom and running a hot dog stand provide practice in calculating prices, percentage discounts and units of measure. Apple, Atari, C-64, TRS-80. $50.

Targets: A Number Game. Combines practice in basic mathematical operations with a logical approach to problem solving. Consists of: a pair of numbers from 0-9; the operations; and a target number from 0-100. Students must combine these numbers with the operation(s) to arrive at the designated target. Atari. $49.

Teasers by Tobbs: Puzzles and Problem Solving. Tobbs, an appealing computer character, motivates students to think logically to solve addition and multiplication problems in number-puzzle grids. Students learn different important mathematical distinctions. Apple, Atari, TRS-80. $49.

Thinking Skills: Practice in Problem Solving. Three programs, Gemini, Sort-a-Set, and Code Quest, stress the logical thinking in problem solving. Develops students' skills in rule formation, object distinction, and classification. TRS-80 cassette, disk. $49.

Tobbs Learns Algebra: Puzzles and Problem Solving. An extension of the award-winning *Teasers by Tobbs* program. Number puzzle grids develop students' algebraic thinking, hypothesis making and testing abilities and problem solving skills. Apple, TRS-80. $49.

The Whatsit Corporation. An extension of the award-winning *Survival Math.* Turns your students into entrepreneurs as they start and run the Whatsit Corporation. Students sharpen math skills while making decisions about bank loans, inventory, price setting. Apple, TRS-80. $49.

SuperSoft, Inc.

Basic Tutor. Self-study program that teaches Basic programming using computerized lessons and supplementary printed manual. Many problems, tests, summary and review. Apple. $99.

Tamarack Software, Inc.

GradeCalc. A grade and attendance management system. Includes summary reports, attendance keeping, a variety of averaging methods and more. Data entered can be output to a printer or brought up on the screen. Apple, Atari, CBM, Pet 4032, 8032, C-64: $29.95. Atari has two disks: $34.95.

Pilot II. An advanced Pilot language. Includes both high- and low-resolution Turtle Graphics. Has a unique sprite editor. Access to the color and sound capabilities of the C-64. C-64. $49.95.

Vanilla Pilot. A full-featured Pilot language interpreter. Includes Turtle Graphics. Color can be set to any of the 16 colors in the C-64. Fully illustrated manual. C-64, Pet 4032, CBM 8032, Vic 20. $29.95.

Teach Yourself by Computer Software

Classfile. Classroom recordkeeping system which displays and prints grades for up to 45 students. User can enter new grades or change old ones, add extra credit, and even print warning letters to parents. User manual included. TRS-80 Models I, III, 4. $19.95 cassette; $49.95 disk.

Earth Science Series. Tutorial with 11 teaching modules on topics from basic chemistry to earth history, plus lab aid program, which uses 20 common formulas and a data graphing routine to turn the computer into an intelligent calculator. Junior high level. TRS-80 Model I, III, 4. $68.50 cassette; $78.50 disk.

Individual Study Center. Presentation programs for use with more than subject data files (sold separately). User can also create own files with help from a special maintenance program. Includes demonstration data file and user manual. TRS-80 Models I, III, 4: $59.95 cassette; $69.95 disk. Apple: $54.95 disk.

Lesson Tutorgraphs—Shore Features. Tutorial with hi-res graphic that familiarizes students with the geographical features of shore/beach area of the coast. Students learn to identify terms such as "back shore." Test provided and graded. Apple. $24.95.

Lesson Tutorgraphs—Weather Fronts. Tutorial with full-color, hi-res graphics which provides introduction to concepts of weather fronts—their structure and nature. Includes review based on response to questions. Test provided and graded. Apple. $24.95.

Mind-Memory Improvement Course—Step 1. Introductory course with 10 tutorial and exercise programs that use graphics and animation to teach memory skills. Based on copyrighted mnemonic system. User manual includes texts, background readings, and extra activities. Apple TRS-80 Models I, III, 4. TRS-80 $26.50 cassette, $31.50 disk; Apple $31.50 disk.

Mind-Memory Improvement Course—Step 2. Supplements *Step 1* and broadens its focus to include memorizing poetry, developing good listening skills and retaining visual information. Audio cassette included. User manual with more information and worksheets. Apple, TRS-80 Models I, III, 4. $31.50 cassette; $36.50 disk.

TAS/Teacher Authoring System. Write 10 pages of text with graphics and review questions. Instructor disk for authoring and recordkeeping. Student disk allows presentation of program and testing. Includes sample lesson and backup disk. TRS-80 Models III, 4. $149.95.

T.E.S.T. Test authoring system that creates, edits, and stores tests and/or worksheets of up to 35 questions. User can print out test with answer key in formats of multiple choice, true/false or completion. User manual includes samples. TRS-80 Models I, III, 4. $13.95 cassette; $24.95 disk.

Words For The Wise. Spelling tutoring system for grades 1-6 with five spelling activities (such as Hangman) and a Word List Generator, which allows the teacher to store her own library. Comes with user manual and prepared list of 1000 words. TRS-80 Models I, III, 4. $24.95 cassette; $34.95 disk.

T.H.E.S.I.S.

Answer Tutor. Effectively teaches children how to answer simple questions in complete sentences. Four units, three levels. Apple, Atari. $20 cassette; $25 disk.

The Big Math Attack. Challenging math program. Combines the excitement and challenges of an arcade game with basic math skills. Students sharpen their skills by entering the correct answer to the equation before it "lands" on the city. Apple, Atari. $20 cassette; $25 disk.

Bulls & Cleots. A mastermind game that pits you against the computer. Try to guess the four-digit code that the computer is thinking of before it guesses yours. Play solitaire or with a friend. Atari. $20 cassette; $25 disk.

Con*Putation. Contains two memory-building programs. A match game for two players. Match any equation behind the boxes with the answer or equal equation. Tonal Encounter challenges you to repeat the melody. Apple, Atari. $20 cassette; $25 disk.

English Grammar. Designed for any grade level. Can be used for all or any of the seven parts of speech. Create your own sentences at the student's reading level and store them on the disk. Child's scores are stored on disk. Apple, Atari. $45 disk.

Fishing for Homonyms. Played like the card game Go Fish. You and the computer try to match the words that are homonyms. Program contains more than 150 sets of homonyms. Improves both spelling and vocabulary. Study sheet contains all the words in the program. Apple, Atari. $20 cassette; $25 disk.

Guessword. The program gives you the synonyms of the secret word. The quicker you answer with the correct word, the higher your score. For one or two players. Atari. $15 cassette, $20 disk.

Hidden Words. A word-search program for one or two players. Four levels of play. The word is displayed on the bottom of the screen. You must find it in the grid before your time is up. Atari. $20 cassette; $25 disk.

It's About Time. Teaches the child to read a standard clock while setting a digital clock; then the child reads a digital clock and sets a standard clock. A game tests the child's ability to set the clock before he runs out of time. Atari. $20 cassette; $25 disk.

Math Facts Level 1. Self-paced instructional program for grades K-1. Concepts covered are: numbers 1-20, number placement, number words, addition and subtraction with and without symbols. Apple, Atari. $20 cassette; $25 disk.

Math Facts Level 2. The child is guided graphically thoughout this level. Addition and subtraction *must* be completed from right to left. This level includes: number sequences to 100; greater than/less than; two- and three-column addition and subtraction. Atari. $20 cassette; $25 disk.

Math Facts Level 3. Highly detailed graphics aid the child in learning how to carry and borrow. The animated creature makes sure that the child works the problems from right to left, carrying or borrowing where necessary. Atari. $20 cassette; $25 disk.

Number Blunder. Lively, animated math program. To solve a problem, you must guide Rusty up the front of the school to the correct answer. You must avoid the windows that are constantly opening and closing. When the answer is correct, Rusty dances. Atari. $20 cassette; $25 disk.

Preschool Fun. Nine-unit program designed for the preschooler. Requires no reading. Develops fundamental skills of color and shape discrimination, numbers from 1-9, upper- and lowercase letters, and basic directions of up, down, left, and right. Apple, Atari. $20 cassette; $25 disk.

Smart Shopper. Lively game that encourages children to know the food groups while they avoid the "junk" food and C.C. Cavity. Atari. $20 cassette; $25 disk.

Spatial Relations. Prepares a child for reading and math skills. Introduces the child to comparative size and the meanings of words which designate the place and position. Units cover: in/out, right/left, over/under, big/small, tall/short, high/low. Atari. $20 cassette; $25 disk.

Spellbound. Spelling program for any age level. Program contains 300 most frequently misspelled words. Add your own words and store them on disk or cassette. Two levels—test level and learning level. Atari. $20 cassette; $25 disk.

Wanted. Track down the fugitive words while studying the clues on the wanted poster. Program improves vocabulary and spelling. Words are described by their meaning, characteristics, part of speech, accent mark, and number of syllables. Atari. $15 cassette; $20 disk.

Weights & Measures. Two programs in one. First learn how to use a ruler, convert inches to feet, feet to yards and back to inches. Then learn how to read a scale. Convert pound to ounces and ounces to pounds. Atari. $20 cassette; $25 disk.

Word Scramble. Reading and spelling aid for lower elementary students. A colorful robot prints the scramble letters on the screen. New words can be added and stored on disk or cassette. Apple, Atari. $20 cassette; $25 disk.

WordMate. Match the words in your hand to form compound words. Computer plays against you. Try to make more compound words than the computer. New words can be added and stored on disk or cassette. 1983 Parents' Choice Award. Apple, Atari. $20 cassette; $25 disk.

Unicom

Grade Reporting. Calculate and maintain data on students, courses, instructors, and enrollment. Prints report cards, calculates GPA, earned credits and class ranks. Hard disk version available. Apple. $250, plus $175 for a KramCard.

School Inventory. Manages school resources, including the complete control of the circulation process. Prints overdue lists and notices and reports complete records of items and patrons. Hard disk version available. Apple. $250, plus $175 for Kram card.

Wadsworth Electronic Publishing Company

Algebra Arcade. An arcade-style game for one or two players that calls on a player's math knowledge to find the equation of a graph that will zap Algebroids and score points while avoiding the fiendish Graph Gobbler. Apple, IBM PC, C-64, Atari. $49.95.

Electronic Blackboard Series. Designed by math educators for math educators. An interactive software package that animates concepts in algebra and trigonometry and allows the instructor to explore the what if . . . ? questions. Apple. $350.

Electronic Study Guide for Precalculus Algebra. Designed for the precalculus algebra student needing supplementary aid. An interactive software package that motivates students to solve their own problems, at their own pace. Apple. $350.

Electronic Study Guide for Trigonometry. Developed by math educators. A dynamic learning tool for individual student use to review concepts, practice techniques, and reinforce understanding. Apple. $275.

Weekly Reader Family Software/Xerox Education Publications

Stickybear ABC. Full-color animated pictures help preschool children learn the alphabet. Program includes disk, hardback book, poster, guide, stickers (ages 3-6). Apple. $39.95.

Stickybear Numbers. Colorful, animated pictures teach preschoolers numbers and counting. Program includes disk, hardcover book, poster, guide, stickers (ages 3-6). Apple, Atari. $39.95.

Stickybear Opposites. Big, full-color, animated pictures teach young children about opposites. Program includes disk, hardback book, poster, guide, stickers (ages 3-6). Apple. $39.95.

Stickybear Shapes. Three colorfully animated activities help youngsters learn about shapes. Program includes disk, hardback book, poster, guide, stickers (ages 3-6). Apple. $39.95.

Window, Inc.

Window (the learning magazine on a disk). A magazine on a disk with a learning focus. Includes a variety of programs, games, and interactive reviews. Apple, Franklin Ace. $24.95 each; $120 for five.

Xlent Software

C.A.M.P. (Computer Assisted Math Program). A sophisticated, well-designed, self-paced math drill for students 6-10. Left-to-right or right-to-left entry of data, joystick operation, printed reports. Atari. $19.95.

Dungeons, Dragons and other Perils. Graphic adventure. Multiple characters. Mazes, potions, magic arrows, spells and hand-to-hand combat make it interesting and challenging. Comes with Dragon's Handbook. Atari. $19.95.

Personal Productivity

Armadillo Int'l Software

Bio-Psychometer. An authentic bio-feedback device and software allows you to connect to the Color Computer and measures changes in bodily resistance. Great for reducing stress through mental training or even a "kissing meter." Requires 32K and Extended Basic. TRS-80 Color Computer. $39.95.

Decision Maker. Not a toy, but a very useful tool to use whether you are a housewife or the president of a bank. Uses standard analytical procedures in getting the user to state the problem and options. A teaching aide. Requires 32K and Extended Basic. TRS-80 Color Computer, C-64. $24.95.

Master Mixologist: A Bartender's Guide. The perfect addition to any party while showing off your computer system to its full advantage. More than 150 favorite bar drinks, both alcoholic and non-alcoholic gathered from around the world. Requires 16K and one disk drive. TRS-80 Color Computer. $19.95.

Super Color Biorhythms. The ultimate biorhythms package written in Basic and machine language quickly plots physical, emotional, and intellectual cycles. Great for parties or serious studies of history. Requires 16K and Extended Basic. TRS-80 Color Computer. $19.95.

Arktronics Corporation

Jane. A mouse-driven software package using easily understood pictures and symbols and generating up to four onscreen 'windows' for display of information. Including three applications: word processing, spreadsheets. and file/list management. For home, personal and office use. C-64, Apple, IBM PC, XT, PCjr & compatabiles. $295.

Artworx Software Company Inc.

Mail List 3.0. A versatile data manager. Addresses are easily created, edited, added to or deleted from your files. Entries can be retrieved by name, keyword(s) or by zip code. C-64, Atari, Apple. $29.95.

Computer Easy Inc.

Dream House. Using simple keyboard commands, you can build an accurately scaled floor plan of your current home or a future home. Perform a home energy analysis. Stores all plans for constant update. IBM PC & PCjr. $19.95.

Instant Software, Inc.

Bowling League Secretary. A comprehensive recordkeeping system that can handle any bowling league. The system is highly adaptable, with 17 different scoring options you can tailor to meet your league's needs. TRS-80 Models I & III. $49.95.

MECA

The Running Program. Let health/fitness expert Jim Fixx become your personal running coach while your computer helps you set fitness goals, keep training records, graph progress, and predict race times. IBM, Apple. $79.95.

Micro Lab

Bulletin Board. If somebody's computer calls while you are out, the Bulletin Board will answer the phone and take a message in writing. Apple. $50.

The Mini Factory. Smaller version of the *Data Factory.* Geared for small business and the home. Sort and search on any field. 88 fields and 239 characters to a field. Change file structure at any time. Apple. $150.

MicroSci Corporation

Insta-Calc. A financial spreadsheet program with computer generated "help-screens." Features a maximum of 20 columns by 30 rows with protected formula cells to eliminate loss of data. Bar and line graphing available with *Insta-Graph.* C-64. $41.95.

Insta-File. Design your own free form files using the TV as a "template" or model builder. A maximum of 500 records per file can be kept. Interfaces with *Insta-Writer.* C-64. $61.95.

Insta-Mail. A mail list program that interfaces with *Insta-Writer* to process names and addresses as listings or labels and to merge them into *Insta-Writer* documents. C-64. $31.95.

Insta-Music. Matches a completed segment of music with a series of musical presents (piano, trumpet, strings, etc.) already pre-programmed or "customized" by the user employing all features of the synthesizer chip. C-64. $99.95.

Insta-Sched. A 13-month calendar with functions such as searches for dates/subjects, block-off time segments and alarms to prevent forgotten appointments and events. C-64. $61.95.

N-Squared Computing

Internist. Differential-Diagnosis—allows user to enter a set of symptoms and prints diseases that are associated with those symptoms. Contains 480 symptoms for 330 diseases from the Merck Manual. IBM PC, XT, PCjr, Tandy 2000, TI Professional, Zenith 2100. $95.

Nutritionist. Diet and nutrient analysis program that graphically displays analyses of foods, recipes, and diets. Identifies deficiencies, excesses, and sources, and searches for special-requirement foods automatically. USDA database with unlimited expandability. IBM PC, XT, PCjr, TI Professional, Zenith 2100, Tandy 2000. $145.

Nutritionist II. Diet and exercise analysis program. Contains 38 nutritive components, including amino acid breakdown and trace elements and cost. Identifies deficiencies, excesses, and their sources and automatically creates food lists for special requirement diets with USDA database. IBM PC, XT, PCjr, TI Professional, Zenith 2100, Tandy 2000. $295.

New Leaf Inc.

Biorhythm+. Classic biorhythm with audio feedback and compatibility comparisons with the option of printed charts on any Commodore-compatible printer. Vic 20, C-64. $14.50 cassette.

Once Begun Computations

Decision. Designed to facilitate decision-making by helping to organize, quantify, and sum subjective judgments. Up to 21 complex alternatives with up to 18 attributes can be analyzed. IBM PC, PCjr. $20.

Kaleida. An interactive kaleidoscope generator designed to provode a relaxing visual experience. IBM PC, PCjr. $12.

Kaleida Designs. Produces kaleidoscopic patterns for use in the design and production of a variety of decorative artworks, including tile mosaics, knitwear, rugs, quilts, and needlepoint. IBM PC, PCjr. $20.

ProSoft

Video Tape Tracker. Organize your video library quickly and easily. This program can store over 1,000 titles and print quick-reference lists by tape number, and/or movie title. It can do a search and even print numbered, titled labels. TRS-80 Models I, III and 4, IBM PC. $39.95.

Quinsept, Inc.

Family Roots. Prints group sheets and individual sheets, four types of charts, indices up to 12,000 names. No limits on the number of people or relationships. Apple, IBM, CP/M based (Kaypro, Epson, Morrow, etc.), Victor. $185.

Softron, Inc.

Home Decorator. Decorate your home or office. We teach you about colors, furniture layout, and the theory behind it. Following simple instructions you select carpeting, paint walls, move heavy sofa beds—and you see it before you make costly mistakes. C-64, IBM PC, PCjr, Apple, Atari. $34.95.

Softsync, Inc.

Model Diet. Creates an individual health profile and tells you what foods you should eat to stay healthy. An extensive food file—over 2,000 foods on file—contains information on nutrition content and calories. C-64, Atari, Coleco Adam. Disk: $29.95; Cassette: $26.95.

Stimutech, Inc.

Expando-Vision. Behavior modification system based on subliminal messaging technology. Consists of hardware (electronic interface device) and software (computer cartridges, disks, and tapes). Vic 20, C-64, Atari. $39.95.

Synapse Software

Relax. The complete system includes a program disk, a sensor headband, and the control unit plus a workbook and audio tape. Combines biofeedback, autogenic training, and progressive relaxation techniques for stress reduction. C-64, IBM, Atari, Apple. $99.95.

SynChron. Use *SynChron* daily to keep track of your personal calendar and appointments. Fine scrolling entry area, with printout capabilities. Helpful for personal time management and perfect for families with busy schedules. Atari. $34.95

Waightsware

Waightsware Six Pack. Inventory filing system, financial security record, mailing list, and telephone directory. Self instructive—no manual. Full file edit, search and sort routines. Screen and print options. Apple. $49.95.

Personal Finance

Aardvark/McGraw-Hill

Personal Tax Planner. Calculates and reduces federal income taxes for the home computer owner by evaluating the federal income tax impact of any financial decision. Increases accuracy and improves recordkeeping. IBM PC, XT, Apple. $99.

Generic Software

Loan-Master. Provides capability to output periodic or annual amortization schedule (lists total interest paid). Loan summary provided. Useful for analyzing home or auto loans. CP/M: $29.95; MS-DOS: $44.95.

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Calc Result Easy. A simple to use spreadsheet program for C-64. Includes 254 lines x 64 columns, built-in graphics, flexible printout formats. Plug-in cartridge. C-64. $49.95.

Card-It. Credit card management program maintains phone numbers in case of card loss. Keeps track of finance charges, indicates current card debt. Report option provides sorted listing of cards on terminal, printer, or disk. CP/M: $24.95; MS-DOS: $34.95.

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Fund-Master. A stock market investment aid especially useful for mutual fund investments. For the casual investor who needs effective buy-sell advice. Conservative approach to stock investments with emphasis on consistent returns. CP/M: $39.95; MS-DOS: $59.95.

Investment-Master. Program to handle lump sum and annuity investment calculations; provides investment summary. Handles deposit or withdrawal annuities. Useful in obtaining answers about savings deposit plans, IRAs, mutual funds. CP/M: $29.95; MS-DOS: $49.95.

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LSEScape. Creates annuity tables given these inputs: amount of savings, yield on savings, rate of withdrawal from savings, length of table, and increments for the first three values. Tables can be displayed or printed. TRS-80 Models III & 4. $19.95.

(M)agreeable Software, Inc.

Stock Helper. Designed by a weekend investor to track up to 100 stocks and up to 20 market indicators for up to 52 weeks (drops oldest information), displays charts on screen or printer, allows splits, data correction, and sorting. C-64. $30.

Max Ule and Company, Inc.

Tickertec. The stock market monitor without a 15-minute delay. Allows clients to monitor 150 stocks of their choice with their own high and low limits and continuous ticker tape. Apple, IBM PC, Vector Graphics, IMS, North Star Horizon TRS-80 Model I, II, III, 4, 12, 16. $1950 to $6975.

MECA

Managing Your Money. By MECA and financial author Andrew Tobias. Seven powerful home financial programs in one: a Reminder Pad, a Budget and Checkbook program, a Financial Calculator, a Portfolio Manager and a Personal Balance Sheet. Apple, IBM. $199.95.

Mehrtens Financial Data Systems

(ASOC) Automatic Summarized Option Comparator. Main program disk and backup; also volatility stock file disk. Computes fair value of up to 20 options; Expectation; Break Even; Delta; etc. 20-page manual. Apple. $80.

Micro Lab

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The Tax Manager. Prepare federal income tax returns quickly and easily with this three-part program. 1040 and most supporting forms and schedules calculated and printed. Global and easy to use. Apple: $180; IBM: $250.

MicroSci Corporation

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Micro Vision

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Income Tax Planner. Calculates an individual's tax liability for a four- or five-year period and can store data for more than 120 clients on a single disk. Ideal for "what-if" situations. IBM PC, Eagle PC, Corona, Columbia, Compaq, North Star. $300.

Realty Software

Home Purchase. Analyzes the effects of insurance, taxes, utilities, interest rates, debt service (loans) and tax bracket, then determines cash necessary, monthly payment and return on investment. Apple, TRS-80, IBM, CP/M. $50.

Softsync, Inc.

Personal Accountant. Contains a double posting bookkeeping system which automatically organizes your finances. An amortization program generates future growth tables, while an integrated database program stores names, addresses, and other pertinent information. C-64, Atari, TS 2068, Coleco. Disk: 34.95; Cassette: 29.95.

Sundex Software Corporation

Certified Personal Accountant. A complete home financial management product. Handles checking, credit card, money market, and savings accounts, as well as stocks, assets, and liabilities. IBM PC & PCjr, Apple, TI Professional, C-64. $149.95; $99.95; $74.95.

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prints checks, reminds you of payments coming due and maintains the tax implications of every payment. IBM PC, PCjr, Apple, TI Professional. $49.95.

Synapse Software

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Turning Point Software

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Xor Corporation

Blu Chip Portfolio Manager. Your broker on a disk, offers current estimates of all sales, purchases, dividends and splits with tax consequences and spreadsheet capabilities. IBM PC & compatibles. $79.95.

XQ Software

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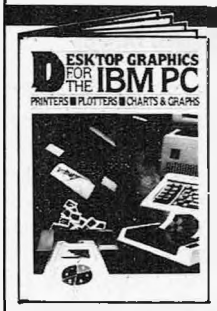

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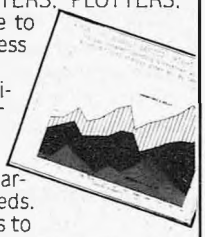

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AlphaBit Communications, Inc.

LazyDoc. Prompts you for standard items you want changed in a document you use again and again. If you are preparing a court order, it can ask "Defendant?" and let you enter the name, which will replace the old Defendant name throughout the document. TRS-80 Model I, III, 4, 4P, Lobo Max-80, LNW. $59.95.

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Proportional Spacing for Centronics 739. Replaces the regular print module for *Lazy Writer* and lets you print proportionally. You can use any *Lazy Writer* print formatting command, including justification, centering titles and text on the page, bold face and underlining. You can change from proportional to regular spacing within text. TRS-80 Model I, III, 4, 4P, Lobo Max-80, LNW. $29.95.

Proportional Spacing for Line Printer VIII. Replaces the regular print module for *Lazy Writer* and lets you print proportionally. You can use any *Lazy Writer* print formatting command, including justification, centering titles and text on the page, bold face and underlining. You can change from proportional to regular spacing within text. TRS-80 Model I, III, 4, 4P, Lobo Max-80, LNW. $39.95.

Proportional Spacing for Qume Sprint 5/C. Itoh F10. Replaces the regular print module for *Lazy Writer* and lets you print proportionally, using any print wheel. It features three standard lookup tables for different wheel sequences, plus lets you make up your own table. It works with either the Qume or C. Itoh F10 printers. TRS-80 Model I, III, 4, 4P, Lobo Max-80, LNW. $49.95.

Proportional Spacing for Radio Shack Daisy Wheel II. Replaces the regular print module for *Lazy Writer* and lets you print proportionally. You can use any *Lazy Writer* print formatting command, including justification, centering titles and text on the page, bold face, and underlining. You can change from proportional to regular spacing within text. TRS-80 Model I, III, 4, 4P, Lobo Max-80, and LNW. $29.95.

Ann Arbor Software

Textra. Inexpensive word processor designed for quickly typing and printing letters, articles, and reports. Highly rated documentation includes "film-on-disk" tutorial. IBM PC, XT & PCjr.; and compatibles. $95.

Blue Sky Software, Inc.

Script/Scratch 64. Full function word processing that gives you 80 columns without additional hardware, a built-in dictionary, and mail list. C-64. $99.95.

Broderbund Software

Bank Street Speller. The first and only spelling checker designed specifically for use with *Bank Street Writer.* Makes it easy to correct spelling errors and typos in everything you write with *Bank Street Writer.* Apple. $69.95.

Bank Street Writer. Features add, move, insert and erase blocks; universal search and replace; document chaining; page numbers/page headers; automatic word wrap; self-teaching tutorial and an easy-to-use reference manual. Apple, Atari, C-64. $69.95; IBM PC & PCjr: $79.95.

Computer Easy Inc.

The Handle. Writing short letters to friends or preparing a master's thesis made easy. On screen help. Features an expandable dictionary for spelling correction and mail merge. IBM PC & PCjr. $19.95.

Computing!

Docu-Power. A boilerplate word processor add on for the CP/M-80, CP/M-86, MS-DOS and UNIX Operating Systems. It takes your previously created text files and turns them into an indexed resource of ideas. CP/M-80, CP/M-86, MS-DOS, UNIX. $149.

CompuView Products, Inc.

Vedit. Vedit is an easy to use, flexible, and powerful full-screen text editor for program development and word processing. CP/M, CP/M-86, MP/M, MP/M-86, Concurrent CP/M-86, MS-DOS, ZDOS, CDOS. $150 to $195.

Davka Corporation

Screenwriter II — Hebrew Version. Professional word processor featuring full Hebrew character set. Interfaces with most standard dot-matrix printers. Exhaustive

manual and handy reference cards. Includes tutorial for word processing novices. Apple. $225.

Executec Corporation

Execu/Writer. A full function word processor that is integrated into the SeriesOnePlus software system. Integrates data with *ExecuFile* database management, *Execu/Model* spreadsheet, and *Execu/Reporter* custom report generator. MS-DOS. $495.

Howard W. Sams & Co., Inc.

Pen Pal. Versatile, powerful, affordable word processor with formatted or unformatted display, lines to 254 characters, disk/tape I/O, text/binary file handling, plus standard features and more. Apple compatibles. $59.95.

Idea Ware, Inc.

The Letter Writer. The first Idea Source (cross-referenced databases of useful information from many subject areas for use only with The Idea Processor). It is a compilation of hundreds of letters, addresses, and correspondence models which can be tailored according to the user's needs. IBM PC, XT, & compatibles with double-sided drives. $59.95.

Information Unlimited Software

Easywriter I System. A total word processing system, including spell checking and mail merge, designed for personal use. IBM PC, XT & PCjr, TI Professional, Compaq Portable. $250.

Easywriter II System. A total word processing system, including spell checking and mail merge, designed for professional use. IBM PC & XT, TI Professional, Compaq. $395.

Innovative Software, Inc.

The Smart Word Processor. Part of the smart series of integrated software products from Innovative Software, Inc. The word processing program contains many features previously found only in dedicated word processors. IBM PC compatibles. Price available upon request.

Kensington Microware

Format II, Enhanced Version. Word processing for the Apple. Supports 15 different 80-column cards. Supports any printer. The only word processor that does true proportional spacing. Built-in mailing list/database with full mailmerge capabilities. Hard disk compatible. Apple; Franklin Ace. $150.

Leading Edge

Leading Edge Word Processing. Professional word processing program enables IBM PC to become a stand alone word processor. Unique functions include: recall deleted text, full onscreen formatting and a "what-you-see-is-what-you-get" display. Includes seven-color printing capability. Document length limited only by disk space. Customer support includes toll-free help hotline. MS-DOS, IBM PC, XT & compatible, Compaq, Leading Edge PC. $350.

Lifetree Software Inc.

Volkswriter Deluxe. Incorporates the clear, simple and easy-to-use qualities of the original *Volkswriter* with sophisticated features for the professional word processor. IBM PC, TI, TRS-80 2000. $285.

Volkswriter Executive. Offers an onscreen tutorial, single keystroke command, plus a complete list of commands at a touch of a key and an affordable price. Easy to install, to learn, and to use. $195.

LJK Enterprises, Inc.

Letter Perfect. Easy to use and learn. Can work with any parallel or serial printer. A single load program written in machine language, and compatible with *Data Perfect.* Search, replace, mix type fonts, underline and boldface. Apple: $104.95; Atari: $99.95.

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Micro Architect Inc.

Word-X. Word processor. Full screen editor with word wrap. IBM PC/XT, PCjr. $58.

MicroPro International Corporation

Spellstar. A spelling checker program that works with *WordStar* to find and highlight spelling and typing errors and allows you to choose appropriate action. IBM PC, Apple, MS-DOS, CP/M-86, CP/M-80. $150.

StarIndex. *WordStar* users can create an alphabetized index, table of contents and other tables and figures. *StarIndex* will organize material within *Wordstar* documents. IBM PC, Apple, MS-DOS, CP/M-86, CP/M-80. $195.

WordStar. The world's bestselling word processing program. A screen oriented word processing system for non-technical people. Offers high performance and flexibility, ease of use for the beginner and power for the professional. Combines all necessary functions to produce error-free, professional documents. IBM PC, Apple, MS-DOS, CP/M-86, CP/M-80. $495.

MicroSci Corporation

Insta-Writer. A cartridge-based word processor that features instant-on operation. Includes the standard functions of a typewriter. Up to 99 pages can be saved per document. C-64. $51.95.

Micro Systems Software, Inc.

Mscript. Menu driven, novice friendly word processor at a user friendly price. Features: headers, footers, format commands (printer codes, justification, centering, margins) blocking commands, text editor commands, insert/delete, and global find and change. TRS-80, LNW-80, Lobo Max-80, Epson QX-10, Zenith Z100, IBM PC, PCjr compatibles. $79.95.

Palantir Software

Palantir Speller. 50,000 word dictionary in 115K of disk storage. Proof of two-page document in 30 seconds. Display errors in context if necessary. Dictionary lookup

and add-to-dictionary capabilities. IBM PC & compatibles, Televideo, DEC Rainbow, NCR, TI, Zenith, CP/M. $145.

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Peach Text Word Processor. A sophisticated, extremely easy to use word processor that offers many flexible features such as: character and block insertions and deletions, global search and replace, boldface print, justified text, and spool printing. IBM PC, XT, Zenith Z-100, TI Professional, Compaq, Eagle PC/1600, Standard 8", Televideo 802, DEC Rainbow, Apple, HP-125, Vector Graphic, Epson QX-10. $250.

Peach Text 5000. Contains four quality Peachtree programs: *PeachText Word Processor* with Random House Electronic Thesaurus, *Spelling Proofreader*, *List Manager* and *PeachCalc* electronic spreadsheet. Interfaces with *Business Graphics System* and *Access Pak*. IBM PC, XT, Eagle 1600/PC, Zenith Z-100, TI Professional, Victor 9000, Epson QX-10, Compaq. $425.

Peach Word Processor with Random House Electronic Thesaurus. The Thesaurus option allows the user to look up synonyms in a file that contains 4400 inexed words and 26,000 synonyms, with a new selection. IBM PC, XT, Zenith Z-1000, TI Professional, Compaq, Eagle PC/1600, Apple, HP 125, Vector Graphic, Epson QX-10. $300.

Spelling Proofreader. A high-performance package that finds spelling mistakes and typographical errors in documents created by *PeachText* and other micro text editors. Can check a 10,000 word document in less than a minute. IBM PC, XT, Zenith Z-100, TI Professional, Compaq, Eagle PC, DEC Rainbow, Televideo 802, Apple. $250.

Perfect Software, Inc.

Perfect Speller. A 50,000-word in context spelling checker that scans 4000 words per minute. CP/M, MS-DOS. $129.

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PromptDoc, Inc.

PromptDoc Document Management System. Enhances word processor; enables user to create templates (templates contain outline, notes, prompts; may also contain text and variable fields), or to use those provided with the system to create and manage documents. CP/M 8-bit, 16-bit; 16-Bit MS-DOS. Price available upon request.

Prosoft

Dotwriter. Creates fancy lettersets on your dot matrix printer. 120 lettersets are available for use with this fully featured graphics text formatter. Intermix type styles and even create new ones. TRS-80, Model I, III, 4. $79.95.

Newscript. Gives superb appearance to your final documents. Many standard features, including true right-justified, proportional on many printers, form letters, table of contents, and index. Handles large documents. TRS-80 Model I, III and 4. $124.95.

Quark Incorporated

Legal Dictionary. An accessory to Lexicheck spelling checker. Adds 8000 legal terms to the basic 50,000 word dictionary. Apple. $85.

Mail List Manager Interface. An accessory to *Word Juggler* that allows you to access files created by Apple's Mail List Manager. Apple III. $35.

Type Face. Enables you to interface *Word Juggler* word processor directly with computerized typesetting equipment. Apple III. $175.

Word Juggler. Word processing program. Contains *PFS/Quick File* interface that allows you to create form letters from existing *Quick File* or *PFS* files. Includes 50,000 word Lexicheck spelling checker with special Word Guess Plus feature. Apple IIe: $189; Apple III: $229.

Select Information Systems

Select Bilingual: The Spanish/English Word Processor. The first word processor to include both Spanish and English menus, help screens and commands. Contains the on-screen tutorial Teach, in both Spanish and English, and has a Spanish/English spelling checker. IBM PC & compatibles. $395.

Select: The Word Processor. A menu driven, full-featured word processor with single-key commands, a built-in expandable spelling checker, a merge program for merging information into mailing lists and an on-screen tutorial, Teach. IBM PC & compatibles, DEC Rainbow, Victor 9000, TI. $295.

Select Write. A menu driven, full-featured word processor in a book with single-key commands, cursor memory, decimal tabs, single key formatting, key files and more. It includes the on-screen tutorial, Teach. IBM PC and compatibles. $99.

Teach/M. The first on-screen tutorial designed to teach customers to use the CP/M operating system. Leads them through booting the system, initializing and copying disks, transferring files, Dir, Stat, PiP, ERA, etc. IBM PC & compatibles, DEC Rainbow, Victor 9000, TI. $49.

Sierra On-Line Inc.

Homeword. A good word processor without a convoluted manual or complicated commands. Short and easy to read instruction booklet—if you want to. Or go straight to the icons, small pictures in the program that represent your many choices of writing and editing tools. Apple, Com-64, Atari. $69.95 Disk.

Homeword Speller. You can begin Homeword Speller with a glance through the manual, because the pictures tell you what to do! Contains a wordbook of over 28,000 commonly used and misspelled words, with the capability of adding another 2500 special words of your own. Apple, C-64, Atari, IBM.

Softlaw Corporation

VIP Speller. Spelling checker which can handle any ASCII file. Comes with 60,000 word dictionary which can be added to or deleted from. Shows words in context for correction. TRS-80 Color Computer. $39.95.

VIP Writer. Full-Featured word processor that features hi-res lowercase displays and ease of use. Works with all printers. TRS-80 Color Computer. $59.95.

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TCS Software, Inc.

TCS Q*Word. A word processing package that stands alone or interfaces with the TCS Total Accounting System packages for customized mass mailings, personalized letters and other documents. Includes advanced editing & printing features. Any 8086 or 8088 microprocessor. Determined by dealer support.

Threshold Software

PapeRiter. Allows an HP 86/87 computer system to create, revise, and print all types of written material quickly. Improves the appearance of documents with several print types and footnotes and incorporates graphics with text. HP 86/87. $99.95.

Write/Idea. A flexible, sophisticated, and easily mastered word processing system. Provides quick, convenient, single touch editing commands, features full cursor control, global search/replace, block moves, text centering and full justification. HP 83/85/86/87. $69.95.

Data Base Management Systems

AB Computers

Flex File 2. A flexible, easy to use database system along with a Report Writer and a Mailing Label routine. Features variable field lengths, nested sorting, nested subtotals, and ability to interface with most word processors. C-64, Pet/CBM. $59.

ABW Corporation

RL-1 Relational Database Management System. Fully relational and includes such operators as join, selection and projection. Features such as a query language, relational editor, report generator, and program interface make the RL-1 system a complete database management package. IBM PC, XT & compatibles. $495.

Alpha Software Corporation

Data Base Manager II—the Integrator. Integrates information/data to and from spreadsheet and word processing packages (i.e, *1-2-3, VisiCalc, Multimate, WordStar)* Also: report generation, label printing, form letters, sorting, searching, integration, field calculations. Merge and reconfigure databases. IBM PC, XT & compatibles, TI Professional, Wang PC. $295.

Applied Software Technology

Versa Form Qbase. A database and reporting system for the personal computer user. Permits the creation of simple screen records with data entry checking. Users may prepare analytic or management reports. IBM PC, Apple. $189.

Aquarius Enterprises Computer Applications Division

AE DataBase Development Program. Database, user-friendly English language, filing, retrieval; applications generator, report generator, integral screen editor, customized to client specifications, links to word processing and spreadsheet. IBM PC & compatibles, Eagle, Corona PC, Columbia PC, Televideo 8 & 16 bit, Franklin, DEC Rainbow. Price available upon request.

Condor Computer Corporation

Condor Data Management Software. Easy to use but powerful data management system, with a sophisticated report writer, indexing feature and relational file management which includes comparing multiple files and joining information from several databases. IBM PC, Apple, HP 150, 125, 86, DEC Rainbow, Dec Mate, Sony. $650.

Dilithium Press

Microbook: Database Manager. Can be used for any application involving the storage and retrieval of information. The programs store, retrieve, and process data. Information is maintained and broken down into files, which are accessed by your own key words. Apple, IBM. $39.95.

Dynacomp, Inc.

DynaBase Database. Easy to use database package that can be configured by user. Utilizes sequential access techniques to eliminate requirement of setting limits on the size of any field and to make most efficient use of disk space. TRS-80 Model I, III & 4. $49.95.

Executec Corporation

Execu/File. A full function database management system that is integrated into the SeriesOnePlus software products. *Execu/File* integrates data with *Execu/Writer* word processor, *Execu/Model* spreadsheet, and *Execu/Reporter* custom report generator. MS-DOS. $495.

Fox & Geller, Inc.

Quickcode. Creates a complete application/file maintenance system in five minutes without any programming. CP/M, IBM PC, XT, Sperry PC, Victor, TI, DEC Rainbow. $295.

Generic Software

Audit (DBMS). Menu-driven database management system. User-friendly. Multiple input screens can be created to allow different "views" of data. Each output format is user-defined; includes headings, totals, subtotals. CP/M. $129.

Depreciation-Master. Database system for assets and depreciation schedules. Includes all IRS Publication 534 methods. ACRS schedules supplied. Allows for multiple methods per asset to handle book/tax accounting. Tax form 4562. IBM PC. CP/M: $149; MS-DOS: $199.

Mail-It II. A mail list database editor, provides for fast sorting and record selection. Record selection may be based on range of Zip codes (9-digit), last names or user-defined codes. Provides for reports; labels to 8 across. CP/M: $39.95; MS-DOS: $59.95.

SEQ-Base. Database editor for any user-defined data; menu-driven. Provides for output of mailing labels and reports. Extremely fast record searching, updating, and sorting. Very easy to use. CP/M: $29.95; MS-DOS: $39.95.

Handic Software Inc.

Micro-Cabinet. Electronic filing system for keyed access of user data. User-defined input/output forms. Fixed and variable length fields to maximize disk space usage. ASCII text file interface. CP/M. $75.

Holiday Software

Data Base 3. A menu oriented, user-friendly data filing and maintenance program that can be used for mailing lists, reports, and data storage. CP/M-80, Kaypro, S-100 8"SSSD. $50.

Howard W. Sams & Co., Inc.

Instant Recall. Friendly, extremely fast data handler allowing free-form entry, instantaneous search-and-retrieval, 28,000-character files, fast printout, and more. Supports IIe features and lowercase, too. Apple II compatible. $59.95.

Information Unlimited Software

Easyfiler. A flexible database manager. Each record can contain up to 50 fields of up to 255 characters each with 1000 characters maximum for each record. IBM PC & XT, TI Professional, Compaq Portable. $400.

Info-Pros, Inc.

Info-Gen. A fast, easy to use, record management system providing quick and easy filing and retrieval of information. In a few minutes, you can easily build a complete menu-driven application as simple as a mailing list or as complex as an inventory control system. IBM PC, XT, 3270, Compaq, Columbia, Toshiba. $245.

Info-Reporter. A flexible, easy to use report writer which uses existing data files to produce comprehensive, cosmetically pleasing reports and forms. IBM PC, XT, 3270, Compaq, Columbia, Toshiba. $125.

Innovative Software, Inc.

Fast Facts. The answer to an executive's personal filing dilemma. Information may be entered into customized forms, stored on disk and retrieved with the touch of a key. Not only makes it a snap to organize your files, but also has a built-in report and list generator. IBM PC & compatibles. $195.

The Smart Data Manager. Part of the smart series of integrated software products from Innovative Software, Inc. Powerful, versatile, and handles a full complement of business needs. IBM PC compatibles. Price available upon request.

Tim IV. A proven data manager for the non-technical business user. Easily organizes, retrieves, sorts, prints, and displays information. Help available through onscreen menus or detailed users' manual. IBM PC & compatibles, DEC Rainbow, NCR Decision Mate V, TI Professional, Burroughs B-20, B-25. $395.

Leading Edge

Nutshell Information Manager. Powerful, easy to use data management system. Automatic indexing on every word and up to 2 billion records. Multi-level sorts and finds. Flexible reporting in many formats, with automatic calculations and color. MS-DOS, IBM PC, XT & compatibles, Leading Edge PC. $395.

Link Systems

DataFax. A free form relational file management system that allows users to create databases that can file and retrieve a large amount of related and unrelated data quickly and simply, by the use of user designated keywords. IBM PC, Sage, Corvus, DEC Rainbow. $299.

LJK Enterprises Inc.

Data Perfect. A powerful database manager system designed with the user in mind. The package includes: utilities generator report generator, mailing labels generator, and a built-in calculator. Apple, Atari. Apple, $129.95; Atari, $99.95.

Micro Data Base Systems/ Consumer Products

Knowledge Manager. An all-in-one information management system ideal for creating powerful decision support systems through its relational data management capabilities. 8086, 8088. $500.

Micro Data Base Systems/ Application Development Products

MDBS I. The first viable database management system for microcomputers. For application developers and educators who want real database management features, but do not yet need the unprecedented capabilities of the MDBSIII. Z80, 8080, 8085, 6502. Price available upon request.

MDBS III. A post-relational extended network database management system that allows the user to define database structures without being forced to employ redundancy or artificial constructs to represent data relationships. Z80, 8080, 8085, 8086, 8088, 68000, PDP-11. Price available upon request.

Screen Master. Furnishes extensive facilities for generalized screen management through two powerful languages: screen development language and screen management language. Z80, PDP-11. Price available upon request.

Micro Lab

The Data Factory 6.0. Easy, but powerful database program. Customize your input screens and reports. Calculator math built in. Sort on up to four fields and search on up to 100 levels. 88 fields and 239 characters to a field. Apple, IBM. $300.

Data Factory for Hard Disk. *6.0 Data Factory* updated to work on a hard drive. Program is networkable and has utility programs built in to allow hook up with *VisiCalc* and merge information from different files together. Apple. $500.

Data Manager III. With 256K and a hard drive you can get 200 fields and 254 characters to a field. The file can grow to 32, 767 records. Sort and search on any field and reconstruct file structure at any time. Apple. $500.

Micropro International Corporation

InfoStar. A unique database management system that features visual composition instead of difficult-to-use command statements to enable the creation and maintenance of business applications by non-programmers as well as operation by non-experienced clerical personnel. IBM PC, Apple, MS-DOS, CP/M-86, CP/M-80. $495.

Microrim, Inc.

Ribase Series 4000. A relational database management system that is not only powerful but also extremely easy to use. IBM PC and all compatibles; HP 150; DEC Rainbow, TI PC; Convergent Technologies; Burroughs B20. MS-DOS, CP/M: $495; CTOS, BTOS: $795.

Multisoft

Multi-Trieve. A relational database integrated with a full function Word Processor. Can merge multiple data files with text files to print custom reports, form letters, mailing labels. Apple IIe. $89.

Omni Software Systems, Inc.

Multi-Base. An interactive management system designed like a large system information database and has all of the attributes of a mini system. IBM PC, Eagle PC, Corona PC, Columbia PC, Compaq. $350.

The Address Book. A collection of programs and subroutines that stores mailing label information and various listings of an information file. IBM PC, Eagle PC, Corona PC, Columbia PC, Compaq. $125.

Perfect Software, Inc.

Perfect Filer. A file management program for keeping track of mailing lists, client sales, merchandise, names and addresses on either a pre-designed or self-designed database. CP/M, MS-DOS. $249.

Palantir Software

Palantir Filer. Provides three level sorting, easy screen creation with *Palantir Word Processor.* Fast data entry and editing. Add, delete, reorder fields, and append data. Merge data for simple or complex reports. IBM PC & compatibles, Televideo, DEC Rainbow, NCR, TI, Zenith, CP/M. $195.

PowerSoft

Powermail Plus. Fast, versatile mailing list system with 500,000+ maximum capacity. Generates user-defined labels and reports. Records printed are user selectable via flags. TRS-80 Models I/III/4; II/12/16 in Z80 Mode. $150.

Salamander Software

D.R.S. (Data Retrieval System). A very powerful and flexible database written in 100% machine code. Features up to 36 fields (26 alpha, 10 numeric), totally user defined screen layouts, report generation. Works from tape or disk. TRS-80 Color Computer, Dragon 32. $14.95.

Softlaw Corporation

VIP Database. Multipurpose data management system featuring lowercase hi-res displays. It has built-in report capabilities and mathematics, plus mailmerge functions for mailing lists. TRS-80 Color Computer. $59.95.

Stoneware, Inc.

Advanced DB Master. Features multiple disk files, keystroke macros, text editing, text merging, computed fields, custom reports, dynamic valve table, array search and more. IBM PC, PC/XT and all 100% compatibles. $595.

DB Master 4 Plus. Lets you create and use files on up to 100 disks. Includes powerful report generator, dynamic prompting, audit trail option, computed fields and short form. Now includes utility paks 1 and 2. Apple. $350.

Supersoft, Inc.

DAX Plus. A professional data base merger with large capacity (maximum records: 32,762). Understands and processes plain English commands for creation of reports. Fast and efficient. CP/M-80, MS-DOS, IBM PC DOS compatible. $549.

Personal Data Base II. Easy to use information filing system designed for the novice. User control over size and layout of fields, sorting, searching, mailing labels. Menu driven. IBM PC. $125.

Synapse Software

SynFile+. Database management program has multiple disk files, free screen format, up to 66 fields per record, and thousands of records per file. Report functions include list and label formats with optional totaling. Atari. $99.95.

Threshold Software

File/Idea. A file management program designed for the professional, scientific, and engineering HP computer user. Includes an entry, editing, printout, and search module with full screen editor, plus utility programs for backup, sort, merge and redesign. HP 86/87. $69.95.

The United Software Company

TMP/Manager I. Powerful database management system. Offers 150 fields per record, 50 characters per field. Fully prompted, menu driven with command structure language available. Powerful sorting. MS DOS compatibles, OS-9. $595.

Xor Corporation

Thoth Action List Data Base Manager. An action-oriented program with three databases that interact to provide a means of tracking in any projects, deadlines, meetings and other managerial responsibilities. IBM PC & compatibles. $99.95.

Business

Aardvark/McGraw-Hill

Fixed Asset Accounting. Comprehensive asset recordkeeping and reporting system with 30 reports to simplify tax preparation, forecasting, and general financial planning. Computations can be completed, revised, and updated throughout the year. IBM PC, XT. $800.

Abacus Associates

Viz-A-Con. A consolidation system for a spreadsheet database. IBM, Apple, TRS-80. $99.95 to $139.95.

Viz-A-Merge. A reporting system that allows electronic cut & paste from within a spreadsheet database. IBM, Apple, TRS-80. $99.95 to $139.95.

Action-Research NW

Aida: Apple Interactive Data Analysis. Statistical analysis, descriptive through multivariate. Case subsets, missing data, full transforms supported. Apple. $235.

Zip-Comm. Telecommunications package to run inside *Zardax* word processor. 300/1200 baud with most serial cards and modems. Apple. $80.

Adler Computer Technology

Close. Designed to improve your sales productivity. Gives you the tools you need to monitor, analyze, and control your operation as if you had a complete staff of management experts selecting the "ripest" prospects. CP/M, MS-DOS. $595.

Addison-Wesley Publishing Co., Inc.

Micro-DSS/Analysis. Microcomputer support tool for analysts and managers; handles information for planning, evaluation, analysis, and reporting; supports all aspects of analyst's job; combines most used features of several packages into one simple system. IBM PC, Apple. $795.

Micro-DSS/Finance. A comprehensive and effective business tool for planning, analysis, and reporting; wide variety of formats and graphic presentations; builds sophisticated models with ease, accessibility, and privacy. IBM PC: $995; Apple: $795.

Advanced Business Technology

LogMars. Allows you to read and print the government standard LogMars bar code on certain dot matrix printers. Comes with Welsh Allyn scanner and firmware card which fits in slot 4, and software. Apple. $595.

Symbtrak. Allows you to read and print bar codes both standard codes and our own LabelCode V on certain dot matrix printers. Includes scanner and firmware card which fits in slot 4, and software. Apple. $495 to $595.

AHA, Inc.

BPS-II. Batch processing system automates all calculations and reports from PMS-II, RMS-II, MMS II so you're free to do other jobs. Largest network—30,000 activities set up in groups of 2500 or less. IBM PC & compatibles. $495.

Harvard Project Manager. Onscreen and printed reports, network diagram, subnetworks, and milestones. Task durations, minutes to years, 200 activities. Aggregate projects via *Lotus 1, 2, 3.* 2-dimensional roadmap/splitscreen management presentation too. IBM PC. $395.

Matchpoint-86. Translates any CP/M program to DOS 2.0. $149.

MMSII. Material management system allocates material to projects scheduled with PMS. Tracks PO's from issuance, 1000 purchase orders, 500 vendors, 32,000 line items. IBM PC and compatibles. $995, demo $50.

PMS II. Project Management System—2500 activities, network diagram, subnetworks merged into master network. Prints bar and Gantt charts, what ifs, 4 sorts, 20 selects, funding schedule, early start, late finish, late start budget or actual. IBM & compatibles. $1295, $50 demo.

RMS-II. Resource Management System allocates resources to projects scheduled with PMS, 96 resources, umbrellas complete network, 32,000 total allocations. IBM PC & compatibles. $995.

Shed-Spread. Customized program people/project management. One day onsite installation, precedence, splitscreen, what if/project impact, extremely fast, source code. IBM PC. $2500, plus travel expenses.

Solomon III. Accounts payable, accounts receivable, address and mailing list, job costing payroll, fixed assets, inventory, purchasing, order entry, sales analysis, solomon reporter. $150 to $5000.

AgData

AgData General Ledger, Cost Accounting, Payroll, Land Leveling. AgData offers microcomputer software to meet farm accounting needs. Financial programs are integrated, provide double entry reports generated from single entry data input by computer checkwriting, entries. CP/M, IBM PC, XT & compatibles. $495 to $995.

AlphaBit Communications, Inc.

LazyCalc. Adds, subtracts, multiplies, and divides any figures you have in a *Lazy Writer* text file. Useful for reports that include numerical data, it saves you from having to figure the totals yourself. TRS-80 Model I, III, 4, 4P, Lobo Max-80, LNW. $29.95.

Alpha Software Corporation

The Apple - IBM Connection. Transfer ASCII files between IBM PC and Apple. A serial card combined with a modem cable provide the link, as well as acoustic modems and all D.C. Hayes products. IBM PC, XT & compatibles, Apple. $250.

The Executive Package. Computing with *1-2-3, VisiCalc,* and Basic. 40 powerful business analysis and projection formulas in ready-to-use programs for all types of executives. IBM PC, XT & Compatibles. $145.

ESP—The Econometric Software Package. Comprehensive forecasting and planning tool designed for full functioned econometric and statistical analysis with graphics and data management on your personal computer. IBM PC, XT and compatibles. $795.

And All Inc.

MAK-$$$. Full G/L, A/R, PR, INV, receipts, check disbursements, appointment calendars, recall letters/lists, pet searches, labels, mailings etc. A full practice management system for veterinarians. 8-bit, 16-bit, CP/M-86, CP/M, MPM, MPM-86, MS-DOS. $3000.

Applied Software Technology

Versa Form Business Forms Database. Simulates familiar business forms. Data can be printed as displayed or on preprinted forms. A management reporting system produces selected and sorted reports of any data items contained in the file. IBM PC, XT & compatibles, Apple, TI Professional. $389; $495.

Versa Form Cash Receipts Journal Application. Runs with *VersaForm* to track cash receipts and income distribution. A variety of predefined reports help manage cash receipts and provide data for financial statements. IBM PC, XT & compatibles, Apple, TI Professional. $39.95.

Versa Form Checkwriter Application. An application template that runs with *VersaForm* to provide an electronic checkbook, automatically keeping disbursement records, and maintaining a bank balance. IBM PC, XT & compatibles, Apple, TI Professional. $39.95.

Versa Form Expense Journal/Distribution Application. Runs with *VersaForm* to track cash expenses. A variety of predesigned reports assist in the management of expenses. Entries can be reconciled to the bank check register. IBM PC, XT & compatibles, Apple, TI Professional. $39.95.

Versa Form Invoicing Application. Runs with *VersaForm* to provide a complete invoicing system. Invoices can be printed on a standard or custom-designed invoice form, singly or in batches. IBM PC, XT & compatibles, Apple, TI Professional. $49.95.

Versa Form Job Cost Application. An application template that runs with *VersaForm* to track labor and material costs to the appropriate job. Predesigned management reports show total labor costs for each job. IBM PC, XT & Compatibles, Apple, TI Professional. $79.95.

Versa Form Legal Office Manager. An application template that runs with *VersaForm* to provide a computerized legal billing system, predefined management reports, and scheduling system. IBM PC, XT & compatibles, Apple, TI Professional. $249.

Versa Form Mailing List Application. Runs with *VersaForm* to print labels for any purpose. A report format makes it possible to print a master list of information. IBM PC, XT & compatibles, Apple, TI Professional. $39.95.

Versa Form Pascal Interface. Contains functions and descriptions to aid the Pascal programmer in accessing forms, index, and form data in the *VersaForm* database. Permits an open-ended system. IBM PC, Apple. $245.

Versa Form Purchase Order Application. Runs with *VersaForm* to automate purchase order operations. Automatically calculates dollar amounts and provides many predesigned reports. IBM PC, XT & compatibles, Apple, TI Professional. $49.95.

Aquarius Enterprises

AE Busyness-Info-MGR. Accounting Modules and DBMS. You can customize accounting modules to your business; use DBMS for customer lists, forms, labels, sales analyses, etc. GL, AP, AR, INV, PR, Sort, DBMS, links to word processing and spreadsheet. IBM PC & compatibles, CP/M-80, CP/M-86, MP/M. Price depends on machine.

Attaché Software Inc.

Attaché Accounting Software. Package of acounting software sold in an attaché case. Modules: Accounts Receivable, Accounts Payable, Inventory Control, Invoicing/Sales Analysis, General Ledger, Payroll. Includes manuals and disk. MS-DOS. Modules available seperately for $595 except Invoicing/Sales Analysis: $395.

Business Pack 1. Attaché Software Accounting package includes: Accounts receivable, Invoice/Sales Analysis, Inventory Control. Comes in an attaché case. Includes manuals and disks. MS-DOS. $1425.

Business Pack 2. Attaché Software accounting package includes: Accounts Payable, General Ledger. Comes in an attaché case. Includes manuals and disks. MS-DOS. $1095.

Blue Sky Software, Inc.

The Last One. Writes bug-free Basic stand alone programs. Thirteen data files with business versions. IBM PC & PCjr, Victor 9000, Zenith 100, Kaypro, Apple, Osborne, Epson, DEC Rainbow, CBM 8032, C-64, CP/M 8". $495; C64: $99.95.

Silicon Office. Integrated software . . . takes you back and forth between word processing, information management, and a calculator spreadsheet. One program—one disk—for three of the most widely used business functions. IBM PC, Victor 9000, DEC Rainbow. $795.

Certified Software Inc.

Certified Accounting System. Includes Payroll, Accounts Payable, Accounts Receivable, Inventory, and General Ledger. An entry level integrated accounting package that can be customized by the end-user, without programming experience or source code, to fit their needs. MS-DOS, CP/M-86, CP/M-80. $195 to $295.

Cobrasoft, Inc.

Business Accounting & Management System. Used by Chambers of Commerce, schools, clubs, boat/storage facilities, rental property management or similar applications where a payment is due at a specified interval. An automatic billing program coupled with a mini-word processor completely automates billing. IBM PC, Olivetti M20. Price on request.

Travel Agency Accounting & Management System. A third generation software package which, when combined with a general ledger and payroll, completely automates the back-office of a travel agency. The accounts receivable program is an open-item type which prints statements, aging reports and age-selectable dunning letters. IBM PC, TRS-80 Model III/4. Price on request.

Compumax, Inc.

MRP-II Manufacturing Resource Planning. Master Schedule up to 30 months. Bills of Materials. Reports: sales, production and purchase planning, cashflow, inventory, customer invoices, floor orders, pick lists, purchase orders, capacity usage. Customers/vendors/general Ledger posting.

Microbiz. General ledger—accounts payable—accounts receivable—inventory control-California payroll-order entry work as an integrated business system. Any single one of the six modules is available standalone at $78.95. IBM PC, Apple, CP/M-80. $378.95.

Microbomp — Bill of Materials Processor. Inventory master file—assembly relationships file—schedule file. ABC analysis stock valuation. Materials requirement planning. Overages/outages. Bill of materials explosion with automatic inventory net-out. Updates ledger. Expands into MRP-II. IBM PC, Apple, CP/M-80. $350.

Comshare, Inc.

Target Applications Library. More than 20 interactive models on disk and in manual (example: cash flow forecasting, etc.) to be used in conjunction with Target Financial Modeling; provides useful starting point for business managers. CP/M, CP/M-86, MS-DOS. $125.

Target Financial Modeling. Spreadsheet using English syntax; build models by using either command-file or matrix approach; consolidation feature; advanced report formatting feature. CP/M, CP/M-86, MS-DOS. $325.

Target Task. Project management program utilizing PERT and CP/M analysis; produce Gantt and expanded Gantt charts, management reports; 350 to 500 tasks per project. CP/M, CP/M-86,MS-DOS. $329.

Control Data Software Company

Micro IPF (Information Processing Family). A set of tools for developing applications and accessing data. Reports, graphs, forms, queries, and menus can be specified. Can be translated into languages other than English. IBM PC, Control Data 110. $465.

Cougar Mountain Software, Inc.

CUB: Comprehensive User-Oriented Business Series. General Ledger, Accounts Payable, Accounts Receivable. Multi-company, fully integrated with single source entry or standalone. Complete audit trail, data sensitive, user designed financial reports. 8080, 8085, Z80. $495.

PUMA: Professional User-Oriented Management Accounting Series. General Ledger, Accounts Payable, Accounts Receivable, Order Entry, Payroll, Inventory. Multi-user, multi-company, audit trail, fully integrated with single source entry, or standalone. User-designed, individualized. 8080, 8085, Z80. $595.

DBI Software Products

Kaleidoscope. Advanced, totally integrated program. Contains applications generator and relational DBMS with a high-level language. Allows you to integrate with popular word processing packages and allows two-way data interface with most popular spreadsheets. CP/M, MS-DOS. $695.

Statistical Processing System. Comprehensive disk-based statistical analysis package for professional and research use. Designed for users who are familiar with statistical procedures and theory. CP/M, MS-DOS. $395.

Decision Tree Software

Micro-Sim II. A simulation package for capital budgeting under risk and uncertainty, using "best-worst-most likely" probability distributions and the random number generator of the computer. Knowledge of basic statistics, net present value helpful. Apple: $49.95; IBM PC: $64.95.

Dilithium Press

TeloFacts: Survey Analysis and Opinion Poll. A complete software package that shows you how to design and automate custom questionnaires, tests, polls, and applications. Enables you to gather opinions, information, marketing data, survey data quickly and easily. Apple, IBM PC. *TeloFacts* 1: $49.95; *TeloFacts* 2: $199.95.

1-2-3 Managerial Worksheets. A collection of useful and creative managerial applications for *Lotus 1-2-3.* Allow you to use the multi-functional capabilities of *1-2-3* to calculate net worth, rate of return, ratio analysis, cash flow management, comparative investment, and linear regression analysis. IBM PC. $39.95.

32 VisiCalc Worksheets. 32 worksheets to expand *VisiCalc.* Developed from everyday routines and activities: games, novelties, business and household applications, statistical analysis and what-if models. IBM PC, Apple. $39.95.

Executec Corporation

Execu/Model. A full function electronic spreadsheet that is integrated into the SeriesOnePlus software system. Integrates data with *Execu/Writer* word processor, *Execu/File* database management, and *Execu/Reporter* custom report generator. MS-DOS. $495.

Series One Plus. Consists of twelve fully integrated software packages. Basic package consists of *Execu/Writer* word processing, *Execu/File* database management, *Execu/Model* electronic spreadsheet and the *Execu/Bus* master program. MS-DOS. $495.

Fastware, Inc.

Thor the Thought Organizer. Integrated database manager with word processing allowing the user to record, categorize and retrieve information without any knowledge of computer syntax, programming, or database managers. IBM PC, XT & compatibles. $295.

Friends Software Corp.

Friend The Report Generator. A report generator for micros. Reads ACCII, Basic, Cobol, and *dBaseII* files, enhancing the report generating capabilities of database systems or use in conjunction with a word processor. CP/M, CP/M-86, MS-DOS. $295.

Futurehouse, Inc.

Complete Personal Accountant. A complete personal and small business finance package. A running demo of the program is included on the back side of the program disk. C-64, Vic 20, Atari, IBM PC, & PCjr, TRS-80 Color. $79.95.

Great Divide Software, Inc.

Critical Path Scheduling System. For defining and analyzing complex projects, scheduling tasks (up to 2150) and a powerful tool for completing a project on time and at the lowest cost. Makes the project manager's job easier. Apple IIe: $285; Apple III: $495.

Great Plains Software

Hardisk Accounting Series. Consists of six modules (General Ledger, Accounts Receivable, Accounts Payable, Inventory, Payroll, Rapid Transfer) designed to meet the accounting and information needs of a small business. $595 module; $295 Rapid Transfer.

Handic Software Inc.

Calc Result Advanced. Provides 32 pages of interrelated information. 3-D feature allows you to consolidate calculations in summary format. Comes on plug-in cartridge and disk. (Disk drive required). C-64. $99.95.

Harvest Computer Systems, Inc.

Farm Ledger. Accounting system. Has the power to handle and monitor cash, check note and account transactions. Entries are checked every step of the process to keep you from making errors. Apple, IBM PC, TI Professional, Victor 9000. $250.

Farm Ledger Pro. Accounting program. Gives you the power to monitor your cashflow, balance sheet and profitability. Can handle multiple checking accounts and write checks as entries are made. Apple. $425.

Horizon Accounting. Double entry accounting tool. Up to 350 accounts can be used with names. Reports include: Trial Balance, Journal Reports, Balance Sheet, Income Statements, Checkbook Registers & Checkbook Reconcilement and more. IBM PC. $525.

Worksheet. Set of 14 decision-aid models, which work in conjunction with *VisiCalc* or *Multiplan*. Enhances your decision-making, allowing "what if" with different values and alternatives. IBM PC, TI Professional, Apple. $75.

Hourglass Systems

Novacalc. Comprehensive spreadsheet with log, trig financial, depreciation, consolidation features. IBM PC, CP/M. $29.95.

HowardSoft

Real Estate Analyzer. Helps you make buy/sell decisions on commercial and residential property. Guides you through the entry of data and produces professional reports with 10-year tables on ROI, cash flow, and sales. IBM PC, Apple. IBM PC: $250; Apple: $225.

Idea Ware, Inc.

The Idea Processor. A combination word-processor/cardfile database/graphics integrator. Stores all graphics and text information in one database, moves text and graphics between database and editor, imbeds graphics in printed documents, and runs user's favorite software from a customized main menu. IBM PC, XT, & compatibles. $295.

Indigo Systems

Underhill Dental Office System (UDOS). Comprehensive A/R with third party billing, patient recall, credit rating of accounts, aging of balances, productivity receipts. Written in *dBase II* for flexibility and compatibility with popular software packages. IBM PC, XT, MS-DOS. Price on request.

Info Designs Inc.

InfoTeam Executive, InfoTeam Professional, InfoTeam Accountant. InfoTeam Professional, InfoPost E-COM Mail System, *WordStar, DataStar, MailMerge, CalcStar,* [option], InfoTeam Accountant— General Ledger/Budgeting, Accounts Receivable, Accounts Payable, Payroll, Inventory, InfoTeam Executive. IBM PC, & compatible. Price on request.

Information Solutions, Inc.

Analyzer. Includes complex bond calculations, lump sum interest calculations, loan amortizations with balloons, future value annuities, and dollar prorations over dated periods. CP/M-80 & CP/M-86. $200.

Alert. Maintains schedules for attorneys and produces a calendar (daily) for each and a firm daily calendar. Manages critical events, statutes of limitations, courtdate and filing deadlines. CP/M-80, CP/M-86. $500.

Firm Solution. Incorporates time-keeping and billing, accounts receivable and productivity management functions in an integrated package. CP/M-80, CP/M-86.

Information Unlimited Software

Accounts Payable. Handles the entire payment process. Assists in taking advantage of discounts and automatically prints detailed payment checks. Compiles statistics for prior year and year-to-date purchases and reports on future cash requirements. IBM PC, XT, TI Professional, Compaq. $595.

Accounts Receivable. Stores detailed invoice and payment information, compiles customer statistics, calculates finance charges, and prints customized dunning letters and customer statements. Accommodates both open-item and balance-forward posting. IBM PC, XT, TI Professional, Compaq. $595.

Easyplanner. An advanced programmable spreadsheet with power and ease of use. IBM PC, XT, TI Professional, Compaq. $250.

Easysales Pro. A professional sales prospect management program that maintains up-to-date information on sales prospects and leads, prioritizes prospects, keeps track of sales quotas, and generates reports on each prospective customer. IBM PC, XT, TI Professional, Compaq. $495.

General Ledger and Financial Reporter. Fully automates recordkeeping and financial reporting. Provides a strong grasp of the current financial performance of a business and helps to improve it. IBM PC, XT, TI Professional, Compaq. $595.

Order Entry. Automatically generates invoices, maintains backorders, prints packing lists, and handles multiple ship-to-addresses. IBM PC, XT, Professional, Compaq. $595.

Payroll. Assists in maintaining critical employee information as well as performing the usual calculation and check-writing functions. IBM PC, XT, TI Professional, Compaq. $745.

Innovative Software, Inc.

The Smart Spreadsheet. Part of the Smart series of integrated software products from ISI. Handles large amounts of data in a variety of formats while performing many different commands. Also has extensive full color graphics. IBM PC & compatibles. Price on request.

Instant Software, Inc.

Easy Calc. Turn your TRS-80 into an electronic spreadsheet. Write your numeric data into rows and columns; then add, subtract, multiply, divide, or exponentiate single values or complete rows and columns. TRS-80 Models I & III. $49.95.

Kern International

Engineering Software for Micros. A package of 25 programs for computer-aided design and analysis on micros. Emphasis in all programs is on combining computer graphics with engineering problem solving. Programs are listed alongside theory and equations and full documentation. Apple, IBM PC, Z-100. $28.50 book; $21.50 disk.

S/Sam. A professional level program for static structural analysis on micros. Written in machine language. Will analyze 3-D frame structures consisting of up to 45-200 members depending on the disk storage. IBM PC & compatibles. $385.

Structural Analysis on Micros. A package of 11 programs for the analysis of 2-D and 3-D trusses and frames. The programs handle linear and non linear trusses including large deflections and non-linear material properties. Fully documented. Apple, IBM PC, Z-100. $48 book; $48 disk.

Visual Statics. Collection of programs that graphically illustrate concepts in mechanics. Programs are highly interactive. All concepts are developed in vector terminology. Several sample applications are also provided. Apple, IBM, Z-100. $65.

Visual Stress and Strain. A package of two programs that solve two and three-dimensional combined stress problems. Emphasis on graphical display of elements and stresses. A useful tool for self-study of stress and strain, as a complement to a course on solid mechanics. Apple, IBM, Z-100. $85.

Visual Vectors. A collection of programs that graphically demonstrate the concepts of two and three-dimensional vectors and vector math. Programs are listed in Basic in a manual that contains a discussion of the concepts covered by the programs and operating instructions. Apple, IBM, Z-100. $65.

Lindbergh Systems

Omniterm. Application: data communications, file transfer, terminal emulation (UT52, VT 100), auto-dial/auto-answer, PC-to-PC, PC-to-mainframe, unattended operation, translation tables, macro keys. IBM PC, XT & compatibles. TRS-80 Models I, III, 4, II, 12. $95 to $245.

Logical Systems, Inc.

Inventory Master. Designed to provide inventory tracking for the small retail-type inventory. Up to 2700 items may be tracked. Computer generated orders, along with many others reports. Supplied on smal-LDOS. TRS-80 Model III, 4. $99.

Mail-File, Series II. A complete mailing list system supplied on the smal-LDOS system. Nine data fields are used, and a constant sort is maintained on both the name and ZIP fields for fast access. Handles ZIP+4. TRS-80 Model I, III, 4. $99.

Mass/Mail System. Designed for use as a subscription or mailing list system. Up to 10,500 records can be stored on a four-drive system. Nine fields are maintained, with sort on ZIP and name. Handles ZIP+4. TRS-80 Model II/12. $295.

Mark Data Products

Business Accounting System. This double entry accounting package is ideal for the businessman needing a fast, efficient means to process income and expenses, prepare detailed reports, and maintain records required at tax time. Disk only. TRS-80 Color Computer. $99.95.

Order Entry System. This order entry system provides a fast, efficient means to enter orders, print shipping papers and invoices, prepare sales reports, and monitor receivables. Disk only. TRS-80 Color Computer. $99.95.

Micro Architect Inc.

Exec-I Executive Info System. Seven applications: Mail List, Stock Security, Personal Finance, Check, Appointment, Memo Writing and Personal Inventory. TRS-80 Models II, 12, 16, IBM PC, XT & PCjr. $99.

IAP, Integrated Accounting Package. General Ledger, Accounts Receivable, Accounts Payable, Payroll, Inventory, Order Entry. TRS-80 Model II, 12, 16, IBM PC, XT & PCjr. $149 to $999.

IOAS-3, Integrated Office Automation System. Integrated database manager, spreadsheet, and word processor. 128K. IBM PC, XT & PCjr. $199.

SS spreadsheet. Can sort, produce bar charts, search, color, and integrate with data files. TRS-80 Model II, 12, 16, 2000, CP/M-80, Xerox 820. IBM PC, XT & PCjr. $59.

Micro Craft, Inc.

Audit. Interfaces to *Verdict* or *Billkeeper* to produce daily posting registers of timekeepers' time, expenses paid for clients, payments re-received from clients plus time distribution reports on accounts. CP/M, CP/M-86, MS-DOS. $240.

BillKeeper. Produces itemized, ready-to-mail bills for the 1 to 25 professionals who bill for time and services, plus office management reports. CP/M, CP/M-86, MS-DOS. $995.

Docket. Produces calendars, past due reports and account reports to help you manage your work. Appointments, critical dates, deadlines, and things to do with self-imposed deadlines are entered into the system. CP/M, CP/M-86, MS-DOS. $295.

The General Ledger for Professionals. Interfaces to *Verdict* or *Billkeeper* to produce balance sheets and income statements plus all other general ledger reports needed by a firm each month. CP/M, CP/M-86, MS-DOS. $995.

Litigator. A litigation support and trial practice management system for attorneys. Reports generated include Case Reports, Conflict of Interest Search Reports, Sorted Reports, Active Cases and Client Lists. CP/M, CP/M-86, MS-DOS. $1195.

Verdict. Produces itemized, ready-to-mail bills for the 1 to 25 lawyer office plus office management reports. A choice of four bill

formats and seven billing categories. CP/M, CP/M-86, MS-DOS. $995.

Micro Lab

Asset Manager. Track up to 999 assets on one disk, and 10 businesses for taxpayers filing 1040, 1065, and 1120. Automatically chooses the method that saves you the most money. Generates reports and prints form 4562. Apple. $200.

Invoice Factory. Accounts receivable program that generates invoices, statements, and reports with automatic entry of up to 100 products. Stores up to 275 master accounts and 500 invoices. Apple. $200.

Payroll Manager. Runs payroll for up to 200 employees. Automatically deducts taxes. Prints checks W-2 forms and an extensive variety of reports. Records sick time, vacation time, personal time and holidays. Apple. $300.

Micropro International Corporation

CalcStar. The powerful, easy to use electronic spreadsheet that calculates solutions to complex numerical problems. Features an automatic form mode for repetitive entries. (Delegated operator entry.) IBM PC, Apple, MS-DOS, CP/M-86, CP/M-80. $195.

MailMerge. Versatile and powerful text and data merging program. Conditional print feature allows selection of data to be merged. Generates personalized form letters, invoices, mailing labels, etc. IBM PC, Apple, MS-DOS, CP/M-86, CP/M-80. $250.

PlanStar. An advanced financial planning and reporting system that uses English language formulas and commands. Offers extensive, built-in financial functions, bar chart generation and three-dimensional models for consolidation. Advanced capability for business forecasting and analysis. IBM PC, XT. $695.

StarBurst. MicroPro's user interface software. Allows managers to develop systems composed of tasks and procedures and then "delegate" the execution of tasks such as data entry, text-editing and report generation to nonexperienced employees. Streamlines repetitive tasks and facilitates system building. IBM PC, XT, MS-DOS. $195.

SuperSort. Fast sorting utility programs. Offers speed and flexibility to sort, merge, and select information from data files in virtually any format available today. Sorting, merging, and selecting criteria is user specified. IBM PC, MS-DOS, CP/M-86, CP/M-80. $200, $250.

Micro Inc.

Proof. Assists users of *VisiCalc, MagiCalc* and the *Call Apple* spreadsheet by printing the formulas and variables used in models and tables. Printing is by row, column, or grid format. Apple, Franklin Ace. $49.95.

Micro Vision

Tax Relief II. A professional tax package. Menu driven and full prompted. Calculation carryover to relevant places, tax summary and client directory. Supports 24 forms and schedules, batch printing and several print options. Input data sheets provided. IBM PC & compatibles, Compaq, Columbia, Eagle, Corona. $299.

Mosaic Software Inc.

Integrated 6. Combines six major programs that otherwise would be purchased separately. Included are a fully relational database, spreadsheet, terminal emulation (IBM and DEC), communications software, Chartman graphics and word processing. IBM PC, XT, Compaq. $495.

New Leaf Inc.

ESP > Calc (Electronic Spreadsheet Planning Calculator). An easy-to-use spreadsheet. Rows and columns are limited only by the memory of your machine. Excellent tool for planning and repetitive calculations. Print spreadsheet hard copies on any Commodore-compatible printer. Vic 20, C-64. Cassette: $43.50; disk: $47.50.

Noumenon Corporation

Intuit. Completely integrates word processing, database management, spreadsheet, forms generation, business graphics, and file management. IBM PC, XT. $395.

Omni Software Systems, Inc.

The Accountant. Designed to provide an easy method for keeping a set of records and producing financial statements that are comparable to those prepared by a professional accountant. IBM PC, Eagle PC, Corona, Columbia, Compaq, North Star. $200.

Accounts Receivable. A standalone system designed to provide for several hundred customers and up to 700 transactions on a double density disk. Stores information on customers. IBM PC, Eagle PC, Corona, Columbia, Compaq, North Star. $300.

After-The-Fact Payroll. For use by accountants who provide bookkeeping services to small businesses. Prepares W-2 forms and all necessary reports and schedules for governmental reporting. IBM PC, Eagle PC, Corona PC, Columbia PC, Compaq, North Star. $250.

The Business Financial Advisor. A business record system for the small business or professional. Prepares expense totals, profit and loss statements showing a complete picture of the financial status of your business. IBM PC, Eagle PC, Corona, Columbia, Compaq, North Star. $150.

The Checkwriter. Automates the checkwriting process and produces a professional looking check prepared on your printer without the use of an accounts payable system. Includes a bank reconciliation program. IBM PC, Eagle PC, Corona, Columbia, Compaq, North Star. $125.

Client Information System. Designed for the busy accountant who wants to automate his total practice. Tracks more than 15 items of information for each client for an efficient accounting office. IBM PC, Eagle PC, Corona, Columbia, Compaq, North Star. $150.

Complete Business System. Includes General Ledger, Accounts Receivable, Accounts Payable, and Payroll. All programs interact with each other. Prints checks, Financial Statements, and several reports and schedules. IBM PC, Eagle PC, Corona PC, Columbia PC, Compaq, North Star. $500.

Depreciation. Computes depreciation using four different methods and is newly updated to comply with ACRS rules. Designed for the professional accountant. IBM PC, Eagle PC, Corona, Columbia, Compaq, North Star. $300.

Distribution. Fast and efficient account analysis and distribution program. For use by the professional accountant who analyzes several clients records each month. IBM PC, Eagle PC, Corona, Columbia, Compaq, North Star. $150.

Form #1099 Generator. Used by the professional accountant to prepare necessary information for the form #1099 for his clients. Meets all IRS requirements. IBM PC, Eagle PC, Corona, Columbia, Compaq, North Star. $200.

Investor. Computes the internal rate of return on the investment in real estate. Makes several computations and produces several reports. Inflation/deflation is also taken into account. IBM PC, Eagle PC, Corona, Columbia, Compaq, North Star. $150.

The Invoicer Plus. A general billing system for accountants, lawyers, any small business. Automatically customized for each type of business to satisfy a wide range of applications. IBM PC, Eagle PC, Corona, Columbia, Compaq, North Star. $200.

Payroll. Prepares complete payroll for any small business or professional. Includes programs for the preparation of all federal and state reports. Prints checks and various reports and schedules. IBM PC, Eagle PC, Corona, Columbia, Compaq, North Star. $200.

Reconcile. For use by the professional accountant to send to his clients after completion of recording entries in the monthly accounts. Designed to inform the client of errors in his checking account. IBM PC, Eagle PC, Corona, Columbia, Compaq, North Star. $75.

The Stock Manager. A stock portfolio system for the small or large investor. Handles up to 500 stocks and prepares several reports including those used for the federal tax return. IBM PC, Eagle PC, Corona, Columbia, Compaq, North Star. $150.

1040 System. For use by accountants who prepare several federal and state income tax returns for clients. Includes all schedules and reports necessary to file a professional tax return. IBM PC, Eagle PC, Corona, Columbia, Compaq, North Star. $1050.

Peachtree Software Inc.

Access Pak. A data exchange product that consists of four programs: *Information Access* (see separate product listing), A *Wordstar*-to-*PeachText* translator, an *Easywriter I*-to-*PeachText* translator and a *VisiCalc*-to-*PeachCalc* translator. IBM PC, XT. $375.

Accounts Payable. Program can be used independently or interfaced with Peachtree's *General Ledger.* Maintains a complete file for each vendor and helps determine which invoices to pay by due date, discount date, or according to certain cash requirements. IBM PC, XT. $595.

Accounts Receivable. Helps you prepare bills for and obtain timely collections from customers. Prints invoices, statements, and aging reports and maintains customer account detail for posting to Peachtree's *General Ledger.* IBM PC, XT. $595.

CPA Multi-Ledger System. A powerful multi-company general ledger capable of providing departmentalized financial statements for a given accounting period. Optional interface with Peachtree A/R, A/P and *PeachPay Payroll.* IBM PC, XT. $595.

General Ledger. The center of a sophisticated series of interactive business application packages. Used independently or in conjunction with other Peachtree accounting programs, it allows the manager to maintain a complete financial picture. IBM PC, XT. $595.

Information Access. Serves as a bridge between the Peachtree Accounting Software and Office Productivity programs. Allows you to create procedures to convert accounting data files to formats readable by *PeachText, PeachCalc* or *List Manager.* IBM PC, XT. $375.

Inventory Management. Offers the user complete control over all aspects of his inventory operations, whether used independently or in conjunction with *Accounts Receivable* and *Sales Invoicing.* Many flexible features and reports generated. IBM PC, XT. $595.

Job Cost System. Gives the small business a reliable means of entering estimates and cost transactions and tracking costs and profitability on a job-by-job basis. Enter costs for labor, equipment, materials, subcontractors, etc. Produces many types of reports. IBM PC, XT. $595.

List Manager. Gives its owner complete control over the design and application of information and mailing lists. Create records with up to 14 line items and three user-defined index keys. IBM PC, XT. $250.

PeachCalc Electronic Spreadsheet. A data analysis system that allows a nonprogrammer to use the microcomputer memory as a large electronic worksheet containing up to 254 rows and 63 columns of text. Can be used for a variety of applications. IBM PC, XT. $150.

Peach Pak 4. Consists of three interactive accounting packages for the small business with limited microcomputer capacity. Included are a general ledger, accounts payable, and accounts receivable program. IBM PC, XT. $395.

PeachPay Payroll System. Offers a comprehensive range of controls over all aspects of the payroll accounting function (including tax and other withholding requirements). Supported by the *PeachTax* service for tax record maintenance. IBM PC, XT. $595.

Personal Calendar. An effective scheduling tool that can accommodate as many as 98 people or facilities. Many flexible features including scheduling, rescheduling and postponing appointments. Could be used by physicians, dentists, lawyers, corporate departments, and small businesses. IBM PC, XT. $195.

Sales Invoicing. A "bridge" between *Inventory Management* and *Accounts Receivable* that allow simultaneous access to and updating of the data files of the two packages without the laborious two-step method of entering data in both separately. IBM PC, XT. $595.

Telecommunications. A high-performance, easy-to-use data communications program. Provides electronic communications between different microcomputers or between micros and time-sharing systems, subscription information utilities, etc. IBM PC, XT. $150.

Perfect Software, Inc.

Perfect Calc. An electronic spreadsheet capable of having seven spreadsheets online at once. Features include split-screen display and a user-extendable function library. CP/M, MS-DOS. $249.

Perfect Link. A menu-driven telecommunications system designed for easy calling of information utilities and electronic mail systems. MS-DOS. $149.

PMI, Inc.

CADfram. A program for structural engineers that performs all necessary analysis computations for a plane framework of arbitrary geometry with graphics, user control, and flexibility. Apple. $500.

Professional Farm Software

ChartMaster. A technical analysis charting package for commodity and stock

investors. Generates high-low-close bar charts, moving averages, point and figure and spreads. Easy to use, manual or electronic update. IBM PC, Apple, CP/M, TRS-80 Model II. $275.

Prosoft

Tallymaster. Helps the person running a business or household gain better control over finances. Revenues and expenses can be placed in up to 702 categories. Menu driven and has built-in help commands. Easy to use. TRS-80 Models I, III, 4. $79.95.

Quark Incorporated

Catalyst. Hard disk program selector. Many programs can be installed onto your hard disk. Programs are then accessed from the main catalyst menu, eliminating the need to swap floppies when switching from one program to another. Apple. $149.

Discourse. Software spooler designed for use with a hard disk or external floppy drive. Files are written to the disk rather than being printed. Program then routes output from the disk to the printer leaving your computer free for other tasks. Apple. $125.

Real-Comp Inc.

Real Analyzer. Five programs in one; for income property and the residence. Helps you decide when to refinance, buy, sell, or exchange any property by projecting cash flow and profitability before/after taxes. IBM PC, XT, Apple. $195.

Real Property Management. For projecting and recording monthly expenses of properties such as apartments, offices, condominiums. Actuals and budget by unit by month. Up to 100 properties and 100 units/properties. IBM PC, XT. $245.

Realty Automation

CARE—Comprehensive Analysis of Real Estate. A series of programs designed to analyze an investment from several different approaches, including rent vs. buy, investment analysis, depreciation schedules, amortization schedules, and other real estate related software. CP/M, CP/M-86, MS-DOS. $500 to $525.

Condominium Association Management (CAM). An accounting system designed to provide management and financial information necessary to run a homeowners' association or condominium. Keeps track of members and dues, including billing for delinquent tenants. Z80, 8080, 8085, 8086, 8088. $795 to $1045.

Condominium Association Management (CAM). An integrated accounting system linked to association member files keeping track of accounting a status of association members. Includes budgeting, a check writer, and is suitable for homeowners' association. CP/M, CP/M-86, MS-DOS. $795 to $1045.

Commercial Property System (CPS). A general ledger system that has the tenant files linked. Can do common area billing as required for shopping centers. Includes budgeting and a check writer. Z80, 8080, 8085, 8086, 8088. $995 to $1045.

Commercial Property Management System (CPS). An integrated accounting system that is linked to the tenant files providing a true general ledger, trial balance, balance sheet, plus tenant information, including common area passthrough. CP/M, CP/M-86, MS-DOS. $995 to $1045.

Comprehensive Analysis For Real Estate (CARE). A series of real estate investment analysis programs for the professional real estate investor. Some of the programs included are: investment analysis, rent vs. lease, loan amortization. Z80, 8080, 8085, 8086, 8088. $500 to $525.

Mini-Storage System (MSS). An integrated accounting system linked to the tenant file to provide accounting and management information required to manage a mini-warehouse or self-service storage facility. Z80, 8080, 8085, 8086, 8088. $795 to $1045.

Mini-Storage System (MSS). Designed to provide management and accounting information to operate a mini self-service storage facility by keeping track of the accounting and tenants, especially late payers. CP/M, CP/M-86, MS-DOS. $795 to $1045.

Mortgage and Note Servicing System (MNS). A receivable system that services the collection of notes and mortgages, with automatic amortization of the payment, impounds, insurance costs, issues delinquent notices. CP/M, CP/M-86, MS-DOS. $1500.

Mortgage And Note Serving System. Designed to service most types of amortized loans. Automatically amortizes the amount received, issues late notices if not received, and keeps track of interest and lenders. Z80, 8080, 8085, 8086, 8088. $1500.

Office and Agent Productivity (OAP). A program for the real estate broker that will keep track of inhouse listing, pending sales, completed transactions plus sales associations ranking, many different reports including 1099's at end of year. CP/M, CP/M-86, MS-DOS. $250 to $275.

Property Management System (PMS). An integrated general ledger system that includes budgeting and a check writer. The tenant file is linked to the G/L providing immediate financial and tenant status reports. Z80, 8080, 8085, 8086, 8088. $795 to $845.

Property Management System (PMS). A general ledger system that includes trial balance, balance sheet, operating statement, and tenant information. All reports can be viewed or printed immediately upon request. 8-, 16-bit CP/M, CP/M-86, MS-DOS. $795 to 845.

Real Estate Analysis Module (RAM). RAM is a series of programs that will generate a one-page printout analyzing the benefits of a potential real estate investment. A decision support package. Also includes a loan amortization program. Z80, 8080, 8085, 8086, 8088. $200 to 225.

Real Estate Office Management (ROM). An accounting package designed around the National Association of Realtors recommended chart of accounts and generates "company dollar" financial statements. Also includes budgeting and checkwriter. Z80, 8080, 8085, 8086, 8088. $350 to $400.

Real Estate Office Management. A general ledger system built to follow closely the suggested National Association of Realtors recommended chart of accounts. Features reports using the "company dollar" method of accounting. CP/M, CP/M-86, MS-DOS. $350.

Residential Property Management (RPM). An accounting and management system designed to manage large numbers of single unit properties, such as houses and condominiums, which use a common checking account. All reports are immediately available. Z80, 8080, 8085, 8086, 8088. $895 to 945.

Residential Analysis Module—(RAM). A series of programs designed to support a decision or make a point that will help in closing the sale. Shows the benefits, if any, of buying vs. renting, loan amortization,

depreciation, investment analysis. CP/M, CP/M-86, MS-DOS. $200.

Residential Property Managemnt (RPM). An accounting system that keeps track of tenants and accounting for single unit properties, like houses or condominiums, and uses a common trust or check account. CP/M, CP/M-86, MS-DOS. $895 to 945.

Realty Software

APR Loan Analysis. Shows true APR loan rate to one hundredth of a percent. Displays total payments, total interest and true APR considering loan fees. Apple, TRS-80, IBM. $50.

Construction Cost/Profit. Great for contractors and investors; allows quick analysis of any building project showing potential profits, cash needed, and loan required. Easy to use. Apple, TRS-80, IBM, CP/M. $50.

Depreciation/ACRS. Includes both straight line and ACRS calculations for assets in the three, five, 10 and 15-year life categories. Straight line available for three to 99 years. Apple, TRS-80, IBM, CP/M. $50.

Income Property Analysis. Provides quick-easy analysis. Up to four loans can be entered along with rents, vacancy factors, insurance, taxes, repairs. Calculations show leverage, return and statistics. Apple, TRS-80, IBM, CP/M. $50.

Loan Amortization Schedule. Handles amortized, fixed payment, interest only and less than interest only loans for annual, semi-annual, quarterly, and monthly payments. Apple, TRS-80, IBM, CP/M. $50.

Loan Sales/Purchase. For anyone buying or selling loans. Calculates present value of loan based on percentage return or calculates the percentage return based on price paid for the loan. Apple, TRS-80, IBM, CP/M. $50.

Property Listings and Comparables. Maintains up to 1500 listings per disk file. Includes an extensive screening capability. Excellent for selecting or appraising real estate. User friendly; menu driven. Apple, TRS-80, IBM, CP/M. $425.

Property Management Plus. Easy-to-use system for single or multifamily properties. Prints checks, rent statements and receipts. Reports late rents, expired leases, vacancies and accounting detail. Includes graphics. Up to 70% reduction in management time. Apple, TRS-80, IBM, CP/M. $525.

Property Sales. Analyzes property sales in seconds, including overall gain, taxable gain, return on investment and cash to seller. All variables can be changed. Apple, TRS-80, IBM, CP/M. $50.

Tax Deferred Exchange Analysis. Analyzes tax deferred or partially deferred exchanges showing taxes payable and the effect on the new depreciable tax basis. Apple, TRS-80, IBM, CP/M. $50.

SimSoft, Inc.

The Depreciator. Calculates and prints depreciation schedules using the straight line, sum of the years' digits, declining balance and Accelerated Cost Recovery System (ACRS) methods. Includes investment tax credits. IBM PC, XT & PCjr. $59.95.

Payment Scheduler. Calculates and prints standard amortization schedules and will produce amortization schedules for odd payment amounts. An odd payment would be a known amount of, for example, $500. IBM PC, XT & PCjr. $49.95.

Softlaw Corporation

VIP Calc. Sophisticated spreadsheet program with hi-res lowercase displays. Offers more features than *VisiCalc,* including sort, locate, definable matrix, and individual column width. TRS-80 Color Computer. $59.95.

VIP Terminal. Professional 80-column readable display with icons for total ease of use. Works with any printer and modem. Allows auto dial, auto log-on, and auto answer. Allows uploading and downloading of programs. C-64. $49.95.

Softlink Corp.

The Practical Accountant. Single entry accounting designed for small business. Powerful and very easy to use program with extensive reports capabilities. Apple & compatibles, IBM PC & compatibles, Grid, DEC, TI Professional. $149.95.

Softrend

25:01 Time Scheduler/Organizer. Time management system used for appointment scheduling, project management, maintenance schedules, legal deadlines, and investment reminders, etc. IBM PC. $99.

25:02 Magazine/Book Reference. Records and retrieves references to any type of information in magazines, books, proceedings, or journals. IBM PC. $89.

25:03 Fixed Asset Manager. Depreciation and asset cataloging tool that performs flexible reporting and asset evaluation. IBM PC. $150.

Softron, Inc.

Form New Corp. For use by attorneys and individuals. Fills out new corporation forms and gives corporation tax rates for all states—for decisionmaking—ready for state filing. IBM PC, Apple, Macintosh. $195.

MP/123. Converts *Multiplan* spreadsheets including formulas, cell contents, etc. to enable continuing work by *Lotus 1-2-3* worksheets. IBM PC & compatibles. $89.

Software Publishing Corp.

PFS Family of Software. *PFS:File PFS:Report* are database programs. *PFS:Graph* is a business graphics program. *PFS:Write* is a word processing program. IBM PC, MS-DOS, Apple, TRS-80 Models III, 4, 2000, TI Professional. $125 to $175.

Soft Path Systems

Brainstormer. A powerful software tool for generating potential solutions to complex problems. Provides both a structure for describing problems and an effective process for finding solutions. TRS-80 Model I, III/4, Osborne I, Kaypro II, Apple, 8" CP/M. 5¼" disk $50; 8" disk $60.

Solutions, Inc.

Dow Jones Spreadsheet Link. Extracts information from Dow Jones News Retrieval databases and loads that information directly into *VisiCalc, Multiplan* or *Lotus 1-2-3* spreadsheets. Apple, IBM PC, PCjr & 3270, TRS-80 Models II/12/16. $249.

Star Value Software

OptionVue Plus. Comprehensive strategy maintenance and analysis for the serious

private investor in options. Handles stock, index, and gold options. Sports fast graphic analysis, Dow Jones access, and automatic investment selection. IBM PC. $495.

SuperSoft, Inc.

ScratchPad Plus. Advanced spreadsheet program featuring virtual memory, flexible grid, up to 999 rows or columns, consolidation, merge, unlimited window splitting, IF/THEN, sorting, and more. CP/M-80, CP/M-86, MS-DOS & compatibles. $195.

ScratchPad with VoiceDrive. All features of SuperSoft ScratchPad spreadsheet plus voice recognition capability for all commands and data entry. Voice recognition hardware required is extra. IBM PC, TI Professional, Software only. $495.

Synapse Software

SynCalc. Second generation, menu-driven spreadsheet program lets you set column widths, and utilize logic, sorting and financial functions. Fully compatible with current *VisiCalc* files. Atari. $99.95.

SynComm. Access the world with SynComm and your modem. Hook up to CompuServe or most computers anywhere, even mainframes. Fine-scrolling readout, multi-segment buffer. Atari. $34.95.

Systems Plus, Inc.

Books! The Electric Ledger. Micro accounting software. Appears on the screen as a typical ledger page. Entries are made with only a few keystrokes. Ability to add or delete accounts while on-line. Detail maintained as long as desired. CP/M, MP/M, MS-DOS, Apple DOS, DEC. $345 to $745.

Client Manager. A CPA write-up package that contains a powerful and flexible report writer. Total flexibility in set-up and numbering of accounts and journals. Menu-driven, password protected, multi-user (under MP/M). CP/M, MP/M, MS-DOS. Price set by dealer.

Flypchart. An educational, sales, training and demo tool that uses flipchart style screens for informations transferral. Has three modes: Automatic, Select, and Step. Easy to set up and use. CP/M, MP/M, MS-DOS. $175.

The Landlord. A powerful, easy-to-use property management package designed to manage the paperwork and accounting functions for any type of income rental property. Handles multiple owners and multiple properties. Apple, IBM PC, CP/M. version 2.04 $595; CP/M version 3: $895.

Lead Manager. A powerful, easy to use information management tool for sales people, account managers, volunteer organizations and so on who must keep track of many people. Call-back prompts, multi-user (MP/M); prints labels. CP/M, MP/M, IBM-PC, MS-DOS. $350.

Medical Manager. A complete accounting and practice management package. Extremely comprehensive and flexible, fast and reliable. Under MP/M, it can support up to eight terminals simultaneously. Handles all insurance forms. CP/M-80, CP/M-86, MP/M-80, & MP/M-86, MS-DOS. $4000 and up.

The Wedge. An electronic spreadsheet supporting 52 columns and 400 rows. Allows split-screen formatting, insertion of rows and columns. Built-in calculator available. Built-in help files. Interfaces with word processors. CP/M, MP/M. $199.

TCS Software, Inc.

TCS Client Ledger System. Multi-company general ledger system designed for public accounting firms and others who provide accounting services. Highlights include the fully integrated passive payroll, ledger consolidation, and more than 50 reports. Z-80 8080, 8085, 8086, 8088. On request.

TCS Inventory. Comprehensive inventory management system that is part of the TCS Total Accounting System. Records inventory levels on an item by item basis and provides audit trails for transaction entries changing inventory status. Z-80, 8080, 8085, 8086, 8088. On request.

TCS Ledger. Comprehensive general ledger package that is part of the TCS Total Accounting System. Records financial transactions and generates comparative data on a company's financial position over a two-year period. Z-80, 8085, 8086, 8088. On request.

TCS Materials. Comprehensive Bill of Materials inventory package that is part of the TCS Total Accounting System. Helps manufacturer determine what parts are in inventory, and generates Bill of Materials. 8086, 8088. On request.

TCS Payables. Comprehensive accounts payable system that is part of the TCS Total Accounting System. Maintains vendor information, helps determine which vouchers to pay by due or discount date, and prints checks automatically. Z-80, 8080, 8085, 8086, 8088. On request.

TCS Payroll. Comprehensive payroll system that works as part of the TCS Total Accounting System, recording employee information and history. Allows departmentalized reporting and keeps current, monthly, quarterly and yearly totals. Z-80, 8080, 8085, 8086, 8088. On request.

TCS Q*Label. Label generation package that is part of the TCS Total Accounting System. Uses information stored in accounting data files to produce user-defined labels in a variety of user-defined formats. Z-80, 8080, 8085, 8086, 8088. On request.

TCS Receivables. Comprehensive accounts receivable system that is part of the TCS Total Accounting System. Maintains customer information, generates invoices, statements and a number of other reports. Z-80, 8080, 8085, 8086, 8088. On request.

TCS Sales. Sales order entry package that enters order information, tracks the order through scheduling and shipping, and records the information into TCS inventory and receivable. 8086, 8088. On request.

TCS Simple. File management and report writing package that works as part of the TCS Total Accounting System. Creates customized reports and queries, stores user-defined data files, and accesses information for display or printing.

Tecnomics

Utilibill FRS—Field Recorder System. A software system for recording utility meter readings using a pocket computer. Signals out-of-range readings, visually and audibly for on-the-spot rechecking. TRS-80 PC-2: $300; Model 100: $350.

Utilibill—Utility Billing System. A complete utility billing system for small utilities with limited budgets. Provides comprehensive billing and reporting capabilities for water, sewer, and/or garbage. TRS-80 Models III, 4 & 4P. $1450.

Utilibill—Rate Analysis Program. Analyzes proposed and existing utility rate

structures, providing total revenues and the average bill that can be expected for each group of customers. TRS-80 Models III, 4 & 4P. $195.

Utilibill Plus—Utility Billing System. A comprehensive utility billing system for up to three metered and three unmetered services. Includes a report generator for maximum flexibility. UCSD p-system. Price on request.

Thoughtware

Management Diagnostic Series (3 titles); Management Training Series (7 titles). A new and unique series of PC-based management training programs. Titles include: "Accessing Personal Management Skills," "Leading Effectively," "Defining Goals & Objects," "Managing Time" and others. IBM PC & compatibles, Apple. Diagnostic Series: $350 each; Management Training Series: $450 each.

Threshold Software

Cosac. A powerful job costing and predicting program applicable to manufacturing, engineering, contracting, service organizations, and generally anyone needing to follow costs on a job-by-job basis. HP 83/85/86/87. $69.95.

Cosac Plus. Combines the cost accounting and productivity analysis of *Cosac* with order-invoice accounting on receivables to create a powerful management tool. Besides journal keeping, it prints reports summarizing this journal activity. HP 86/87. $99.95.

Sercal. A program to calculate the size of electrical services to commercial buildings. Designed for architects, contractors, engineers, plan checkers, and others in the building industry. Produces forms for submission to building inspectors. HP 83/85/86/87. $69.95.

The United Software Company

TMP/FreeForm. Electronic index card filing system. Text can be entered into file cards. File cards can be up to nine pages long each. Key word and wild card searches can be done to find information fast. IBM PC & compatibles, OS-9. $225.

Wall Street Graphics, Inc.

Market Eas-Alyzer. Stock market technical analysis for the professional and individual investor. Many features. Apple, IBM PC. $695.

Weiss Associates, Inc.

Venture Financial Planning and Analysis System. A structured financial analysis system containing all the logic, calculations, accounting procedures and 16 all-encompassing reports providing a detailed analysis of any business or project. IBM PC, XT & compatibles. $495; demonstration system $15.

XQ Software

The Tax Strategist. A sophisticated program for evaluating tax reduction strategies, capable of computing the federal income tax liability for up to 10 years. IBM PC, XT & PCjr, Corona, Columbia, Compaq. $395.

Xtrasoft, Inc.

Storeminder. A proven, fully integrated software package for retail sales and inventory management. IBM XT, NCR, TI, Televideo, Victor, Zenith, Compaq. Price on request.

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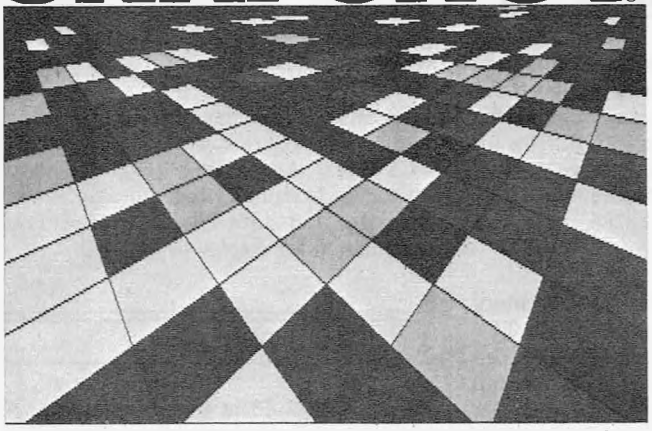

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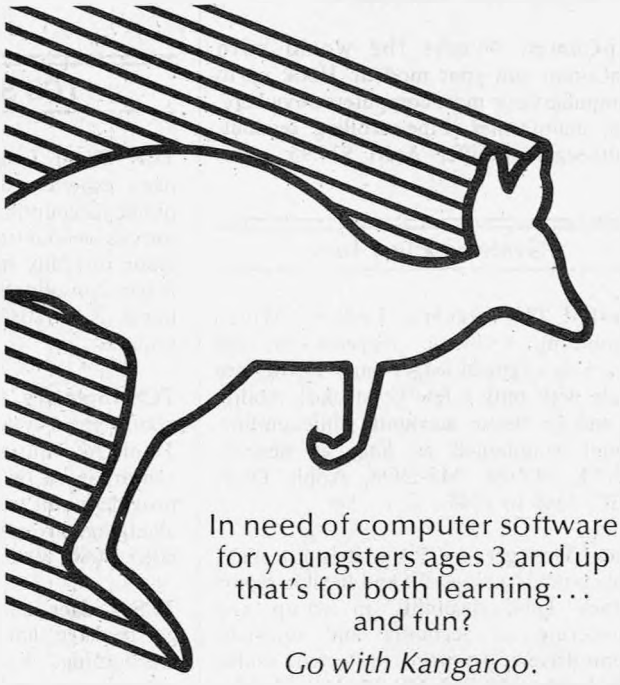

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KMMM Pascal. Full-featured Pascal suitable for Advanced Placement courses. Includes source code editor with syntax checking. P-code compiler, and P-Code to machine language translator for fast, optimized object code. C-64, Pet/CBM. $99.

Ann Arbor Software

Textra Jr. Fast, friendly, full-screen programming editor. Copy, move, search, replace, merge, auto indent. Rated the best buy in *PC Tech Journal* comparative review of 18 editors. IBM PC, XT, PCjr & compatibles. $39.95.

Armadillo Int'l Software

AIForth. A figForth Language Compiler customized for the IBM PCjr. A real development tool that allows you to write your own system commands. Includes written manual and 5¼" disk. Move up from Basic. IBM PCjr. $39.95.

Armadillo Bug—Machine Language Monitor. An excellent system for beginners to write and debug machine language programs. Also allows each entry of machine language programs from magazines without time consuming POKEs and PEEKs. Runs in 16K. TRS-80 Color Computer. $14.95.

ColorForth. A Forth Language Compiler with an execution time 10 to 20 times faster than Basic. Easier to learn than Basic, and allows users to install their own commands. 50 new words beyond standard figForth. 16 through 64K cassette or disk. TRS-80 Color Computer. $49.95.

PCForth. A figForth Language Compiler customized for MS-DOS systems that will read IBM PC formatted disks. Move up from Basic to a true all-purpose language. Includes resident compiler and editor. 75-page manual on 5¼" disk. 32K. IBM PC, TI Professional, Compaq, MS-DOS. $59.95.

Artisoft, Inc.

Clip. CP/M Supercharger. A powerful UNIX-like shell providing command line recall and editing, built-in calculator and text editor, macros, I/O redirection, pipes, and more than 50 new CP/M commands. CP/M, Z80. $49.95.

Barr Systems, Inc.

Barr/Hasp. Hardware/software package simultaneously transmits jobs and receives printouts with IBM MVS/JES, VM/RSCS bypassing TSO & CMS. Emulates HASP on 360/20 and 3777-2. Easy installation, 1200 to 19,200 baud, 1000 lines per minute, and multiple printers. IBM PC/XT, Compaq. $890 (with one-year warranty).

Computer Associates in Education

Screen-Builder. Format your display on the screen; merge into your programs. Get *all* characters from keyboard. Center, outline, justify, draw, large or normal characters. TRS-80 Model III/I disk. $35.

Snake. A Logo-like language with a control system similar to Basic. Features loops, variables, expressions, procedures, and animation. TRS-80 Model III/4/I disk & cassette. $42.50.

Computing

Menu/Power. A 20 utility menu-driver front-end for the CP/M-80, CP/M-86, and MS-DOS operating systems. It copies, erases, renames, reclaims, gives sizes and stat and even tests your disks for bad sectors. CP/M-80, CP/M-86, MS-DOS. $149.

Power! A 55 utility menu-driven front-end for the CP/M, CP/M-86, and MS-DOS operating systems. Copies, renames, reclaims, tests disks for bad sectors, and fixes glitched directories and data. CP/M-80, CP/M-86, MS-DOS. $169.

Computer Innovations, Inc.

Optimizing C86 Compiler. Full C compiler, Kerninghan and Ritchie standard, 1 Mb addressing, in-line 8087 support, standard linker and object format, assembly output option, DOS 2.0 compatibility, full library source. 8086, 8088, CP/M-86, MS DOS. $395.

Creative Solutions, Inc.

Multi-Forth and MacForth (For Apple). A real time, multi-tasking 32-bit implementation programming environment. Provides operating system with editor assembler and other utilities that all run in under 64K. Multi-Forth (for all versions but Apple). $1295 and up. ($149 on Apple Macintosh).

Data Base Decisions

Inside Track. Gives your programs speed and control. Read files as fast as DOS, display data faster, load programs faster, control memory use, run any program from your program, and more. Manual and disk with source code. IBM PC, XT. $45.

Peeks 'n Pokes. Shows you how to access and modify the status of the PC. Perform DOS/BIOS function calls from Basic or Pascal. Learn how to find more Peeks 'n Pokes and much more. Manual and disk with source code. IBM PC, XT. $30.

Davong Systems, Inc.

Multi-OS. Enables DOS, CP/M and UCSD Pascal operating systems to reside on same hard disk. File locking, password protection, back-up, and restore utilities features. IBM PC, XT & compatibles. $99.

Info-Pros, Inc.

Info-Sort. A fast sort/select program designed to be used as a standalone utility or to be interfaced with existing applications. Can process up to 65,535 records with a maximum record length of 4096. IBM PC, XT & 3270, Compaq, Columbia, Toshiba. $95.

Inner Loop Software

ScrollMate. Adds off-screen scrolling memory to PC-DOS. Compatible with most DOS (not Basic) programs. Saves up to 14 screens. IBM PC. $69.95.

VDTE 2. Emulates Hewlett-Packard terminals on an IBM PC. Emulates HP

2624, HP 2648 and DEC VT52 type terminals. Also supports file transfer between PC and host. Block mode and graphics supported. IBM PC. $200.

Instant Software, Inc.

DOS Customizer. Use easy-to-remember single-letter commands to change error messages to make them clearer; add overdrive to your DOS to load programs up to four times faster. Apple. $24.95.

J & K H Software

Multi-Disk Informer. Produces a master catalog listings of disks and files. File Report identifies for each filename: type, protection, size, disk ID. Disk Report identifies for each disk ID: Sectors used, available and total, and file totals by type. TI 99/4A. $29.95 (standalone); $19.95 (requires SXB).

SXB—Super Extended Basic. Requires: XB, XM, Disk. A powerful group of more than 100 TMS9900 assembly language subroutines which substantially expand the programming capabilities of the TI 99/4A. Includes Sort with up to 127 key fields. TI 99/4A. $99.95.

JRT Systems, Inc.

JRT Modula 2. The advanced new programming language which evolved from Pascal. The modular approach allows programmers to develop large programs composed of small modules which are kept in a program library. CP/M with 8" disk drives, Apple, Osborne, Kaypro, Xerox 820. $99.95.

JRT Modula-2 PC Version. A complete implementation of the Modula 2 programming language designed to run on the IBM PC. Monthly updates are available. IBM PC, CP/M-86. $99.95.

JRT Pascal Format Program. A text reformatter which automatically beautifies any Pascal source listing; designed to run in conjunction with the JRT Pascal System. $29.95.

JRT Pascal PC Version. A complete implementation of the Pascal programming language designed to run on the IBM PC.

Monthly updates are available. IBM PC, MS-DOS, CP/M-86. $29.95.

JRT Pascal Version 3.0. An inexpensive but complete implementation of Pascal for microcomputers. It includes screen formatting, indexed files, picture formatting of numbers, and 14-digit precision BCD floating point arithmetic. CP/M 8", Osborne, Kaypro, Xerox 820. $39.95.

JRT Pascal Version 4.0. A low cost, full-featured Pascal with many extensions for business and general use. It has 14-digit precision BCD floating point arithmetic. CP/M Formats: 8", Apple, Kaypro, Osborne, Xerox 820. $69.95.

Lichen Software

LSDrawII. Fast, sophisticated, and user friendly screen editor, written in 100% assembly language. More than 80 commands and options. Print displays on Epson printers, with or without Graftrax Plus. 60-page manual. TRS-80 Models III & 4. $39.95.

Logical Systems, Inc.

The LDOS 5.1 Operating System. The new generation of operating system for TRS-80s. Includes both full-feature communications and file manipulation utilities. With LDOS, you can configure the system to meet your needs. TRS-80 Models I, III (4 in Mod III mode). $129.

The smal-LDOS 5.1 Operating System. Represents the new generation of operating system for TRS-80s. A sub-set of the full LDOS operating system, includes many of the most-used features of LDOS. TRS-80 Model I, III (4 in Model III mode). $59.

LED—The LDOS Text Editor. An all-purpose full screen text editor. Supports Hex entry of characters that can't normally be entered from the keyboard. Ideal for editing program text or ASCII files under LDOS. TRS-80 Model I, III, 4. $29.

The LSI Help System. A series of related packages that can provide help from DOS or within an applications program. Versions for TRSDOS 6.X, Basic, technical information (Z80 assembler and DOS interfacing). TRS-80 Model 4. Price on request.

LS-LED—The TRSDOS 6.X Text Editor. An all-purpose full screen text editor and supports Hex entry of characters that can't normally be entered from the keyboard, also block insert/write. Ideal for editing program text or ASCII files under TRSDOS 6.x. TRS-80 Model 4. $99.

LS-The Basic Answer (LS-TBA). A text preprocessor that allows writing Basic programs with a text editor (no line numbers), using labels for branching, and long variable names. The text is then converted to a form that can be executed by Basic. TRS-80 Model 4 with TRS DOS. $79.

(TBA) The Basic Answer. A text preprocessor that allows writing Basic programs with a text editor (no line numbers), using labels for branching, and long variable names. The text is then converted to a form that can be executed by Basic. TRS-80 Model I, III, 4 with LDOS. $69.

Mark Data Products

Super Screen. A powerful, machine language program that significantly upgrades the performance and usefulness of 16K or greater, extended and disk Basic Color Computers. Expands the display screen to 51 x 24. TRS-80 Color Computer. $29.95 cassette; $32.95 disk.

Micro Lab

Programmers Helper. Write cleaner and more efficient Applesoft Basic programs with this new collection of 24 Ampersand Commands. Makes programming faster and execution faster. Improves error handling capability. Apple. $50.

Microsparc, Inc.

AMP (Amper Memory Program). AMP moves the disk operating system into the upper 16K of a 64K computer. This increases the usable program space in your Apple by providing an extra 10K. Apple, Franklin Ace. $29.95.

GALE (Global AppleSoft Line Editor). An Applesoft line editor with hex/decimal conversion, auto line numbering, search and change, renumber, append, variable cross reference, and user definable macro functions. Supports 48K, 64K, and IIe keys. Apple, Franklin Ace. $49.95.

MacroSoft. A library of assembly language macros that look like Basic commands. Using Microsparc's assembler, assembled programs are up to 50 times faster than Applesoft. Apple, Franklin Ace. $49.95 ($99.95 with The Assembler).

Micro Systems Software, Inc.

DOSPlus 3.5 Disk Operating System. The very best operating system for the TRS-80 Models I and III. Filled with features and utilities. Faster and much more powerful than TRSDOS. TRS-80 Models I & III, LNW-80 Models I & II. $149.95.

DOSPlus IV/A Disk Operating System. An alternative to TRSDOS 6.x. Includes M-ZAL (the macro assembler) and Ted (a full screen text editor). It is much faster and easier to use than 6.x and is packed with utilities including a "sort." TRS-80 Model 4, III W/VID-80, Lobo, Max-80, Sanyo. $169.95.

MTerm. Menu driven, user friendly, smart terminal program. Features: Auto Dial, Auto log-on, Macro Keys, Translation Tables, Direct File Transfer between machines, incoming data captured at all times; command compatible on all machines. TRS-80, LNW-80, Zenith Z100, IBM PC, Chameleon, Compaq, Corona, Columbia. $79.95.

6.0 Plus — TRSDOS 6.x enhancements. Features: Sort, Comprehensive Cross Referencing, Search and Replace Basic Text, Lable Addressing, Shorthand, Diskzap, Diskdump (file oriented disk editor), Map (locates files by track and sector), Dircheck, Restore (restores "killed" files). TRS-80 Model 4. $49.95.

Micro-Ware Distributing Inc.

The Clone Machine. A utility to do track block editing and back up of disks for the C-64 and 1541 disk drives. Commodore. $49.95.

New Classics Software

Pascal 80. A highly interactive Pascal compiler, excellent for teaching or learning Pascal. Purchased by thousands of individuals and hundreds of schools. Full editor and compiler are integrated into a single program. TRS-80 Models I, III, 4. $79.

Pascal 80 CP/M. A highly interactive Pascal compiler, excellent for teaching or learning Pascal. Purchased by thousands of individuals and hundreds of schools. Full editor and compiler are integrated into a single program. CP/M 2.2 or 3.0 required. TRS-80 Models, I, III, 4, Apple, Kaypro, Osborne, Morrow, Epson. $39.95.

Penguin Software

Disk Arranger. Arrange disk files by file name or type and move individual files elsewhere. "Dummy" file names can be added as headings or remarks; the Hello program can be changed to any file in the catalog; and any file can be deleted, locked, or unlocked. Apple. $29.95.

Short Cuts. Adds extra commands to Applesoft Basic that provide for easily prompted, formatted, and verified input, print formatting, fast sorting with tag files that can point to disk, and options for implementing help screens. Apple. $39.95.

PMI, Inc.

Microscreen. A screen handling system designed to allow microcomputer users to make full use of VDU's. Allows programs written in Basic to pass data to and from a VDU a screenful at a time. Apple with Softcard, North Star, Zenith, Superbrain, Osborne, Kaypro. $59.95.

PowerSoft

Backrest. Hard drive backup/restore program writes hard disk image to floppies in minimum time (5 Mb—9 minutes). Image may be restored to hard disk at any time Requires LDOS (Model I/III) or TRSDOS 6 (Model 4). TRS-80 Model I, III, 4. $75.

Power Driver. Printer drivers for use with Radio Shack's SuperScripsit. Supports Epson MX-80, FX-80, C. Itoh Prowriter 8510/1550, C. Itoh Starwriter Daisy Wheel. TRS-80 Model I, III, 4. $29.95.

Precision Software

Ramdrive IIe. A fast disk emulation program for all 64K and 128K extended 80-column cards. Features access indicators, DOS speedup capability, and a copy utility. Two versions, DOS 3.3 and Pascal, or CP/M. Apple. $29.95.

Prosoft

RPM. Measures the rotational speed and fluctuations of your disk drives, and warns you if they are running too fast, too slow, or unevenly. Shows current and average speeds, plus fluctuation history. TRS-80 Model I, III, 4. $24.95.

Quality Software

Assembler. Write your own 6502 machine language with this in-RAM editor to create and edit your assembler source code. Then use the assembler to translate the source code into machine language. Atari (16K). Cassette: $24.95.

Cross-Ref. Includes these functions: variable cross reference, find variable, replace variable, line cross reference, variable only listing, line only listing. Can speed and facilitate your Applesoft program development. Apple. Cassette: $22.95. Disk: $24.95.

Linker. Dynamically loads and relocates suitably prepared machine language programs anywhere in RAM. Combines a main program with subroutines. Contains a library of subroutines. Will search more than one disk. Apple. Manual: $19.95; Disk and manual: $49.95.

Q.S. Forth. Writing programs in Forth is much easier than writing them in machine language, yet Forth programs run almost as fast—many times faster than Basic programs. A language that builds on itself. Atari. Manual: $39.95; disk and manual: $79.95.

6502 Disassembler. This easy to use disassembler is a Basic program that decodes the part of memory you specify, translating machine code into assembly language and displaying it in assembly language format on the video. Atari (16K). Cassette: $11.95. Disk: $14.95.

Rainbow Computing, Inc.

File Freedom. File utility which allows transfer of data files from software packages such as *Multiplan* and *VisiCalc* and will download data files from mainframes. Apple. $99.95.

SimSoft, Inc.

Programmer's Tool Kit. Set of 45 Basic routines on disk. They can be used by existing programs or to develop new programs. Also includes a screen/keyboard manager for CRT screen displays and keyboard input. IBM PC, XT, & PCjr. $69.95.

Spectrum Projects

Extended Disk Basic. Add new powerful commands to your 64K disk system, inverse video, wild card directory, double POKE and PEEK, NSAVE, NLOAD, LDIR, OLD and TYPE. TRS-80 Color Computer, 64K, disk. $27.95

Hidden Basic. A protection feature for your Basic programs. Modify your code so CLOAD, CSAVE, LIST, EDIT, DEL, and LLIST will not function. TRS-80 Color Computer, 16 to 64K. $22.95.

Multi-Pak Crak. Save ROM Paks to your 64K disk system using the TRS-80 Multi-Pak Interface. Eliminate constant plugging in of ROM Paks by keeping all your Pak software on disk. TRS-80 Color Computer, 64K, disk. $27.95.

Softron, Inc.

Ez/Disk. Turn your disk drive into a powerful, simple to use machine. No more lengthy Basic commands. Call the menu anytime; your program in memory remains intact until you load or run another. C-64. $24.95.

Ez/Disk Plus. Complete control of the 1541 disk drive by the user. Stays in memory together with other programs. LOAD, SAVE, RUN, RENAME, FORMAT, COPY disk (1 or 2 drives), display files. C-64. $34.95.

Softsync, Inc.

Zeus Assembler. Greatly simplifies machine code programs. Unique features include: a full screen editor, automatic line numbering and renumbering, and a mini-monitor. TS 2068. $19.95.

Zeus Disassembler/Monitor. Allows you to translate machine code into assembly language instructions. You can examine the Basic ROM, and investigate the functions of the TS 2068 or analyze your own machine code routines. TS 2068. $19.95.

SuperSoft, Inc.

Basic compiler. Generally compatible with Microsoft Basic interpreter. Two pass compiler generating relocatable object code. Uses BCD math routines for greater accuracy. Superset of standard Basic. CP/M-86, MS-DOS. $300.

C Compiler. Most features of UNIX version 7 C. A multipass compiler—intermediate code is optimized and assembly code output to disk file. 135 library functions supplied with source. CP/M-80, CP/M-86, MS-DOS. $350.

Fortran. ANSI 66 standard Fortran compiler with extensions. Compiles 600 lines per minute. Supports complex arithmetic, character variables, functions, and recursive subroutines with static variables. Z80, CP/M-80, CP/M-86, MS-DOS. $425.

Superware

Easy. For those interested in machine language programming. An aid for use with AMAC or MAC/65 which allows programming in machine language using Basic-like statements. Detailed manual documents more than 60 macro commands included. Atari. $39.95.

FDOS. Gives Forth users named file handling (Data File, FNT) and normal DOS functions. Allows direct loading and/or conversion of DOS 2.0S files to FDOS files, sector and screen copying. Required Fig-Forth Kernal. 32K. Atari. $39.95.

XBasic. An extension of Atari Basic, XBasic is a well-tested machine language program which provides 30 new functions, including integer and string arrays, player missile graphics. Requires less than 3K RAM. Tape and disk available. Atari. $29.95.

WittSoft, Inc.

Disk Basic Compiler. Provides 100% compatibility with interpretive Disk Basic. Requires no technical knowledge or editing of source programs. TRS-80 Model I, III, 4. $199.95.

Xlent Software

Mode Mixer 1 & 2/Bahle Stations. Generates error-free Basic code for customized screen displays. Allows user to mix graphic modes without any knowledge of display lists. Tutorial-style documentation provided. Also included, exciting Naval Warfare Game. Atari. $19.95.

Utilities

Comm*Data Computer House, Inc.

Basic Tools. A programmer's utility that provides many additional Basic commands including Find, Renumber, Append, Auto, and others. C-64 (tape or disk). $19.95.

Generic Software

Catalog-Master. A disk cataloging program. Provides for selection criteria and file descriptions for master directories, sorted by file name; menu-driven. Output can be directed to user's terminal, line printer or disk file. CP/M. $29.95.

Form-1. Creates screen forms. Includes set of routines to link or merge with user's program. Sample program shows convenience of screen mode for data entry and modification. Sequential and random file structures supported. CP/M: $19.75; MS-DOS: $29.95.

GComm. Communications program for H8/H89 computers. Allows user-selection of all communication parameters: baud rate (110-9600), parity, duplex mode. Supports direct-connect or communication over phone using modems. CP/M. $24.95.

SFCom. Utility provides control of terminal data input and display. Can be used with programs written in MBasic, Fortran-80 or assembly language. Makes data entry more friendly. Includes a screen form editor. CP/M. $19.95.

Gryphon Microproducts

dB/RA, the Array Program for dBaseII. Adds 1-, 2- and 3-dimensional arrays and over 65,000 memory variables to *dBASEII* programs. Includes the functions Dimension, Load, Store, Restore, Save, Find, Clear, and Display for arrays. Works from within *dBaseII.* IBM PC & compatibles. $200.

dBRx, the Math/Stat Program for dBaseII. Adds the functions Sin, Cos, Sort, Arctan, Exp, Log and Log E to *dBaseII* programs. String functions to trim all blanks from the left, compress multiple spaces within a string to one, and remove all spaces are also included. IBM PC, Ap-

ple, 5¼" Z80, 8085, and 8080, IBM 8". $150.

dHelper Part 1, the Data Dictionary Program for dBaseII. Adds one-pass cross-referencing, syntax checking, procedure merging and program formattting to *dBaseII* programs. Tells you the type of each variable and whether it has been defined. IBM PC, Apple, 5¼" Z80, 8085, 8080 IBM 8". $150.

PUP1, Pascal Utility Package 1. Moves Basic files to a Pascal disk and sets the system date. Produces printer-formatted listings of Pascal text files. Apple. $39.95.

PUP2, Pascal Utility Package 2. Moves Pascal and Pilot files to a Basic disk, modifies and edits any byte on a Basic or Pascal disk. Apple. $39.95.

Howard W. Sams & Co., Inc.

Apple Aids. Lets you copy and format disks; restore deleted files; load, inspect, alter, and write to any sector of any normally formatted disk; do text dumps; work better with Exec files; and more. Apple. $49.95.

Financial Planning Mind Tools. Templates that instantly format the cells in *Lotus 1-2-3, Multiplan, VisiCalc,* and *SuperCalc* spreadsheets with labels and formulas to do 18 different financial calculations. Apple, IBM PC & compatibles. $79.95.

Hello Central! Menu-controlled terminal program with built-in 20-command text editor dials all calls, takes messages, allows remote control, converts Basic and binary files, and more. Apple & compatibles. $99.95.

Idea Ware, Inc.

The Idea Manager. Builds a customized main menu that runs your favorite software (up to eight different programs that run under MS-DOS) in one simple operating environment. Software such as *1-2-3, dBaseII, The Idea Processor,* and other programs can be tied together. IBM PC, XT & compatibles. $49.95.

Information Analysis Systems Corp.

Genterm. Complete communications package with conversational mode, file transfers with error checking, file capture, automodem support (autodial and log-on files), unattended operation. IBM 3101 emulation available at extra price. IBM PC, Compaq, Columbia, DEC Rainbow, Osborne 1, Kaypro, Morrow Microdecision, NorthStar Advantage, Actrix. $79.95.

Instant Software, Inc.

Disk Library. Store your program names and disk titles on the library disk and you will always be able to find them—fast. Easy to use, and *Library* has extensive file handling capabilities. Apple. $24.95.

Microterm. The first truly high speed terminal program. Also a complete communications package that includes all of the support utilities for your telecommunicating. IBM PC, TRS-80 Model III. $79.95.

Kensington Microware

1-TO-1: MCI Mail. Combines word processing and communications software with an "address book" to make your dialogue with MCI Mail quick and easy. Establishes a connection with MCI Mail, logs on with your password, sends messages, picks up mail and saves it to disk, all automatically. IBM PC, XT. $180.

1-TO-1: Remote Control. The link between portables such as the TRS-80 Model 100 and NEC 8201A and the IBM PC. *Remote Control* lets you communicate with and control your unattended IBM PC over the telephone from your portable keyboard. (RS232 cable also provided for direct file transfer.) IBM PC, XT, Compaq & compatibles. $180.

1-TO-1: Western Union EasyLink. Combines word processing and communications software with an "address book" to make your dialogue with *EasyLink* quick and easy. Establishes a connection with *EasyLink,* logs on with your password, sends messages, picks up mail and saves it to disk, all automatically. IBM PC, XT. $180.

Link Systems

DataLink. A state of the art telecommunications tool which includes 10 terminal emulations, single keystroke commands, two levels of help, auto receive and answer and supports baud rates of up to 9600. IBM PC, Compaq. $299.

Logical Systems, Inc.

DiskDISK. A utility that allows the emulation of a disk drive using a file on a larger physical drive. Ideal for the partitioning of a hard disk or other large volume drive into smaller logical units. TRS-80 Model I, III, 4. $99.

FED II. An all-purpose disk and file editor or zap utility. Files may be searched, modified, dissassembled, or printed. A must for all advanced users and assembler programmers, but helpful for beginners, too. TRS-80 Model I, III, 4. $39.

File Manager (FM). A utility designed to aid in manipulating groups of files. Files may be killed, copied, or moved, or filenames listed and/or used to make a JCL file for other operations. Many parameters may be used to group files. TRS-80 Model I, III, 4. $39.

Filter Package #1. A group of 14 utilities and filters for use under LDOS. Highlights: XLate—translate any character, to any other character. SlashO—slash zeros on printers that can backspace. Calc—Hex/Decimal/Binary calculation. TRS-80 Model I, III, 4. $29.

Filter Package #2. A group of 9 utilities and filters for use under LDOS. Highlights: Maxlate—translate any character to any group of characters. KSMPlus—macro key definitions like KSM, but also edit key definitions and more. TRS-80 Model I, III, 4. $29.

I/O Monitor. A utility to allow the interception of disk I/O errors. On getting an error from a bad disk, the operator may retry, ignore the error, or abort the process that caused the error. TRS-80 Model I, III, 4. $19.

LS-DiskDISK. A utility that allows the emulation of a disk drive using a file on a larger physical drive. Ideal for the partitioning of a hard disk or other large volume drive into smaller logical units. TRS-80 Model 4. $99.

LS-FED II. An all-purpose disk and file editor or zap utility. Files may be searched, modified, disassembled, or printed. A must for all advanced users and assembler programmers, but helpful for beginners, too. TRS-80 Model 4. $49.

LS-File Manager (LS-FM). A utility designed to aid in manipulating groups of files. Files may be killed, copied or moved, or filenames listed and/or used to make a

JCL file for other operations. Many parameters may be used to group files. TRS-80 Model 4. $49.

LS-Host/Term. A comprehensive communication package that allows the Model 4 to act as a host, and also emulate an Adds-25 terminal. Full cursor positioning and file transfer using buffer or Modem7 protocol are supported. TRS-80 Model 4. $199.

MemDisk. A utility to allow the emulation of a disk drive using part of the main memory in a I or III. Includes source code. Note that *MemDisk* will *not* use memory outside the normal 48K on these machines. TRS-80 Model I, III, 4. $29.

Utility Disk #1. A group of 14 utilities for use under LDOS. Some highlights: Dircheck—check and repair directories. Typein—allows automatic control of many programs that won't work with JCL (Profile 3+ HD and others). TRS-80 Model I, III, 4. $39.

MECA

Basic Building Blocks. This interactive Basic tutorial includes the MECA Basic Design Tool, a powerful debugging utility for any level programmer. Apple, Atari, IBM. $79.95.

Micro Lab

LifeSaver. Can reconstruct data from a blown disk down to the nibble level. Checks drive timing and then if any magnetic markers are destroyed, it reads the adjacent markers and reconstructs some or all missing data. Apple. $25.

MicroSci Corporation

Insta-Speed. A compiler program designed to convert a source program into a more efficient form that runs at an average speed increase of 25 to 35 times. 100% compatible with Commodore Basic. C-64. $123.95.

Microsparc, Inc.

Amperkit #1. Provides add-on utilities for MicroSparc's *AmperSoft*. Includes IF-THEN-ELSE statement, improved CHAINing, labeled GOTOs and GOSUBs for quick execution, nine-column sorting, and more. Apple, Franklin Ace. $39.95.

Ampersoft. Provides Print Using feature, matrix math functions, a quick sorting command, and more utilities to use within Applesoft programs; moves DOS into upper 16K of a 64K computer. 64K required. Apple, Franklin Ace. $49.95.

The Assembler. Translates a 6502 assembly language source file into machine code. Includes a built-in editor, 8080 assembler macros, a subroutine library, several utility functions, and macro libraries. Apple, Franklin Ace. $69.95; $99.95 with MacroSoft.

Directory Master. Lets you format and customize the screen display which appears when the disk Catalog command is used. Makes it easy to delete, undelete, and sort files in any sequence. Apple, Franklin Ace. $29.95.

Key Perfect. A utility to spotlight errors in programs entered from magazines or books. Compare your *Key Perfect* table to the published one to home in on your typing mistakes. Apple, Franklin Ace. $29.95.

Lexicom 3.0. A file transfer utility which can transfer many word processing files to and from DOS 3.3 sequential files. Use with Applewriter I, Supertext, Muse Address Book, Muse Data Plot, CP/M text to DOS text, and more. Apple, Franklin Ace. $49.95.

Teletext. Makes telecommunications easy. Can convert Apple Pascal text files, Applesoft, Integer Basic, and binary programs to DOS 3.3 textfiles. Apple, Franklin Ace. $79.95.

Micro Systems Software, Inc.

BBS-80 Bulletin Board System. Allows a person to exchange messages or information via the telephone. Features: Message Reformatting, Personal Messages, Multi level System Security, Permanent User Records, Individual User Passwords and File Uploading/Downloading. TRS-80 Model I, III, 4. $79.95.

Mosaic Software

Softplot/BGL. A device independent graphic subroutine utility that will enhance the capabilities of any program. Written for use with MS-DOS or CP/M. Provides a set of high level commands which produce a variety of complex graphic images. IBM & compatibles, TI Professional, Osborne, Otrona, Wang, TRS-80. $99.

Ojai Software

Matrix Master. Diagonalize, find the determinants of, invert, multiply, and divide any size, up to 10 x 10 matrices. A math utility. C-64. $15 cassette.

PowerSoft

Graphit. Plotting utility for *VisiCalc* DIF files. No special hardware required; any lineprinter will do. Program includes full scaling commands. Data modification commands, etc. TRS-80 Model I, III. $39.95.

Impakt! Basic programming utilities which include Search/Replace, Trace with breakpointing, Copy lines, Join lines, Delete superfluous code, etc. TRS-80 Model I, III. $39.95.

Master Mechanic Set. Selected utilities for TRS-80s running under LDOS. Ten utilities for modifying and fixing glitched disks. A must for every TRS-80/LDOS installation. TRS-80 Model I, III, Lobo Max-80. $39.95.

Model 4 Toolbelt. Utility programs for Model 4 and TRSDOS 6. 15 files for disk modification, directory check/repair, disk reformatting/verification, mass file copies, etc. TRS-80 Model 4. $49.95.

Powerscript. Modification utility for Radio Shack *Scripsit* word processor. Allows transmission of printer control codes from text. Sorted directories, chaining of files at print time, etc. TRS-80 Model I, III. $39.95.

Setmaker. Utility for reprogramming the Max-80's character generator under LDOS. Custom fonts may be created, saved, changed at any time, or installed in operating system. Lobo Max-80. $29.95.

Setwriter. Companion utility to Setmaker. Allows printing of customized display on Epson bit-image printer. Max-80. $29.95.

Super Utility Plus 3.2. Memory resident utility package with 80 distinct functions for modifying disk sectors. Repairing glitched disks. Formatting/Reformatting disks, etc. TRS-80 Model I, III, 4, Lobo Max-80. $79.95.

Toolbox For LDOS. Utility package for the LDOS 5.1.x operating system. 22 Files/programs for disk/file modification, directory check/repair. Mass file copies, disk reformatting/verfication etc. TRS-80 Model I, III, Lobo Max-80. $69.95.

Prosoft

Faster. Machine language utility that speeds up most Basic programs by 20 to 50%. No hardware changes are involved. Works on your own or purchased programs. Can even handle programs that are too large to be compiled. TRS-80 Model I, III. $29.95.

Quick Compress. Fast machine utility that removes the blanks and remarks from even the largest Basic program in less than 3 seconds. Takes only 276 bytes of memory and produces smaller, faster programs without altering their logic. TRS-80 Model I, III. $19.95.

Trashman. Machine language utility that can reduce string compression time of Basic by 95%. Works with other machine language programs and with all major operating systems. TRS-80 Model I, III. $39.95.

Quality Software

Bag of Tricks. Four comprehensive disk utility programs on disk and documentation that includes many more pages of information about the Apple II disk operating system. Apple. Book and disk: $39.95.

Quark Incorporated

Terminus. Communications program, an accessory to *Word Juggler,* accessed with a single keystroke. Permits communication between your Apple and other RS-232 devices. Suited for electronic mail and other communication applications. Apple. $89.

Rainbow Computing, Inc.

Disk Fever. Disk utility for manipulating, repairing, and protecting all data stored on disk. Examine and change any portion of a disk, correct space usage, and lock out bad tracks. Apple. $29.95.

Softlaw Corporation

VIP Terminal. Most popular communications program for the Color Computer provides hi-res lowercase displays. Allows auto log-on, auto-dial—and all parameters can be changed. TRS-80 Color Computer. $49.95.

VIP Disk-Zap. A disk repair utility for recovering data from crashed disks. Easy-to-use menu system, with complete tutorial to teach the rudiments of disk repair. TRS-80 Color Computer. $39.95.

Softron, Inc.

Keyboard Overlay - Soft/Lay. Save yourself time. All you need is at your fingertips immediately. No endless paging through manuals and books. Basic commands, memory locations and maps, sprites, sound, and more. C-64, Vic 20. $8.85.

SoftwareBanc

DBPlus. Sort, compress, and transform *dBase*II data files. Menu-driven, no programming knowledge necessary. CP/M, MS-DOS. $125.

Solutions, Inc.

Rapid Transfer. Allows users to extract information from Great Plains Hardisk Accounting Series and load that data into *VisiCalc, Multiplan,* or *Lotus* spreadsheets. IBM PC, XT, Apple. $150.

RealLink. Allows users to extract data from MBSI's General Ledger Accounting Series and load that information directly into *VisiCalc, Multiplan,* or *Lotus* spreadsheets. IBM PC, XT, & PCjr. $125.

Report. Enables user to create professional quality reports from *VisiCalc.* IBM PC, XT, Apple, TRS-80 Models I, II/12/16, III. $79.

Sort. Sorts the rows and columns of a *VisiCalc* spreadsheet in ascending or descending order either alphabetically or numerically. IBM PC, XT, Apple, TRS-80 Model I, II/12/16/III. $89.

Source Telecomputing Corporation

Sourcelink. Communications software for dialing The Source. Provides auto-dial; file transfer; function keys; graphics; and more. IBM, Apple. $49.95.

Spectrum Projects

Fast Dupe. Fast disk copier. Will format and backup a disk in only one pass and can make up to four disk copies at once. TRS-80 Color Computer, 64K, disk. $22.95.

Schematic Drafting Processor. Save hours of work and design. Professional-looking electronic diagrams using a 480 x 540 pixel worksheet with six viewing windows. Dump hard copy to printer and save the created schematics to disk. TRS-80 Color Computer, 64K, disk. $49.95.

64 Column Model I/III Emulator. Give your Color Computer a 64 x 16 screen. Run Model I/III Basic graphic routines without retyping the graphics statements. TRS-80 Color Computer, 64K, disk. $22.95.

64K Disk Utility. Make an additional 8K of RAM available. Copy ROM cartridges to disk and create a 32K spool buffer for printing. TRS-80 Color Computer, 64K, disk. $24.95.

Tape Utility. A powerful package that transfers tape to disk and disk to tape automatically. Does an automatic copy of an entire disk of programs to tape. TRS-80 Color Computer, 16 to 64K. $27.95.

Term Talk. A speaking smart terminal program. Contains all the features of an intelligent communications package, and it talks. TRS-80 Color Computer with Spectrum Voice Pak. $39.95.

Superware

Scroll It. A relocatable machine language program that allows the Basic programmer to do variable speed horizontal, vertical, and diagonal fine scrolling with a simple POKE. Tape and disk. Atari. $19.95.

Unicom

Network Manager's Toolkit (NMT). An extensive set of software tools that allows you to control, direct, and maintain your Apple/Corvus network. Increases efficiency, productivity, and security. Apple, Corvus hard disk. $300.

Xor Corporation

C Tools—C Language Utilities. A collection of more than 50 C language routines. Includes keyboard, mode, text, graphics, sound, system environment routines, and source code. IBM PC & compatibles. $99.95.

Graphics

Accent Software

TGS: The Graphic Solution. A graphics animation development system for the non-programmer to develop training and education aids, sales and product demos, or to learn computer graphics. Apple, IBM. Apple: $149.95; IBM on request.

AlphaBit Communications, Inc.

Lazydraw and Lazydo. Lets you draw pictures on the screen, add them to a *Lazy Writer* file, then print them on paper. This works only with printers that can print TRS-80 block graphics. *Lazydo* lets you enter a series of *Lazy Writer* commands from DOS. Sold as a package. TRS-80 Models I, III, 4, 4P, Lobo Max-80, LNW. $19.95.

Animation Graphics, Inc.

A.G.I.L. Paint Program. Easy to use program for illustrations, text, geometric shapes, two-page animation. Includes a variety of pens, shapes and fonts. Uses joystick and keyboard. Select features from easy to use menus. Apple. $35.

Super Slide Show. Turns the Apple computer into a slide projector—for briefings, demos, slide shows, and personal enjoyment. Apple. $29.

Artway Software Company Inc.

Drawpic. Provides the user with an easy way to create screens in graphics modes 3-7. Use your joystick and simple commands to create beautiful images. Atari, C-64. $29.95.

Baudville

Pixit. A graphics processor that features shape creation, full screen hi-res picture editing and a large library of pre-drawn shapes. Easy to use, forgiving of errors, an ideal product for beginners. Apple. $49.95.

Blue Sky Software, Inc.

The Graphic Designer. Graphics editor that allows you to create hi-res pictures which may be saved on a disk for later inclusion in your own programs. C-64. $39.95.

Comm*Data Computer House, Inc.

Sketch & Paint. Hi-res graphic pictures created using only a joystick. Added features allow keystroke graphic effects and color painting. Pictures may be saved to tape or disk for later recall. C-64, Vic 20. $27.95.

Dave Sackett

Magellan Light Pen System. The hardware provided consists of the light pen and interface module. Supplied software includes: Quick-Draw, a powerful graphics editor and Amper-Pen, a light pen/Applesoft interface program. Apple. $129.95.

Decision Resources

Chart-Master. A powerful, flexible, easy to use graphics program, designed by business managers for business managers. IBM PC, XT. $375.

Sign-Master. An easy to use graphics program that allows you to create text pages, outlines, tables, headlines, and other "word charts." IBM PC, XT. $245.

Fox & Geller, Inc.

dGraph. Menu-driven, single keystroke *dBASE II* graphics package. Needs no programming knowledge to create professional quality business graphs. CP/M, IBM PC, XT, Sperry PC. $295.

Grafox. A powerful, standalone, menu-driven package that produces presentation quality color or black/white graphs at the stroke of a key. IBM PC, XT & compatibles, Sperry PC. $295.

Frank Parr/Animcalc

Animcalc — Animation Stand Move Calculator. Calculates moves for hand-cranked animation stands. Up to 6 axes, including rotation. Any degree of taper may be assigned each coordinate. TRS-80, Apple, Commodore, OSI. $49.95.

Graphic Communications Inc.

Graphwriter. Designed for professionals who require "mainframe quality" presentation materials. Chart types include Gantt, bubble, organization, word, table and pie-bar combination. Choice of fonts, color, scaling, orientation and size. IBM PC, XT, DEC Rainbow, NEC APC, HP 150, Burroughs ET2000.

Idea Ware, Inc.

The Grafix Idea. A graphics sketchpad and presentation tool. Creates and combines drawings, pictures, and graphs, and labels, colors, and draws on images from other programs. Also builds and run on-screen slide show presentations. IBM PC, XT & compatibles. $79.95.

Innovative Software, Inc.

Fast Graphs. A complete business graphics program. Transform your raw numerical data into colorful graphs enhancing presentations or reports. Communicates with you in plain English questions, allowing you to use the program immediately. IBM PC & compatibles. $350.

Island Graphics

The Illustrator. An easy to use graphics paint program. A pallette allows you to mix colors. Use the brushes provided or make your own brush. Use the Koala, Chalkboard, or Atari graphics tablet as well as light pens. Apple, Atari, Commodore. $89.50.

J & K H Software

Video Titles I. Produces custom titles for video recordings. Three proportionally spaced character sets, variable spacing with automatic eye correction, 26 foreground/background color combina-

tions and multiple screen division with scrolling. TI 99/4A. $29.95, tape or disk.

Video Titles II. Produces automated sequences of custom titles for in-store advertising or video recordings. Three proportionally spaced character sets. Storage for 40 titles, 40 sprite patterns, and 10 title sequences. TI 99/4A. $49.95 disk.

Video Titles III. Provides a means of easily producing custom titles in your own programs. Three programs (one for each proportionally spaced character set). Output is to screen (and printer) giving hexadecimal coding for CALL CHAR statements. TI 99/4A. $24.95.

Kern International

C-Graphics. This softkit shows you how to use the powerful C language to create machine level graphics subroutines. The book is a tutorial that shows how to create your own machine language graphics subroutiness using C. IBM, Z-100. $38 book; $28 disk.

Data Plotting Software for Micros. A collection of 21 programs that process and display data. They draw histograms, piecharts, bar charts, stock markets charts, log and semi-log plots, etc. Menu-driven programs, modular and fully documented. Disk contains the same programs without the documentation. Apple, IBM, Z-100. $28.50 book; $21.50 disk.

Designer—3-D. Professional Level 3-D graphics design program. Interactively create 3-D drawings on the screen, rotate in three dimensions, enlarge, view in perspective on disk in machine language with a user's manual in Basic A with full documentation. Apple, IBM PC; Z-100. $85.

Kiwisoft Programs

Paintpic, Cadpic. Complete color drawing and painting for the C-64, using multicolor bitmap. Graphics can be incorporated in Basic programs. C-64. Paintpic $37; Cadpic $75.

Lichen Software

LSShowi. Allows you to create animated shows. Self-contained machine code programs are created which can be chained with other programs on disk. Does not create displays. 32-page manual. TRS-80 Models III & 4. $29.95.

Micro Lab

Graphics Wizard III. Create graphic images, charts, and graphs with simple keystrokes. Use built-in circle and square makers or plot your own designs. Use dot matrix, C. Itoh, Datasouth, or Epson MX-80 printers. Apple. $500.

Multigraph. Enter data manually or from a file and *Multigraph* will automatically create a graph. You don't plot lines or points; *Multigraph* does it all. Create line, print, or bar graphs. *Data Factory* files may be used. Apple. $150.

Painter Power. Abstract painting is easy and fun. Make an electronic paint brush and paint colorful computer graphics. Give a slide show or print a hard copy. Beginner and advanced modes. Apple. $40.

MicroSci Corporation

Insta-Graph. Create, edit or combine bar and line graphs with the *Insta-Calc* cartridge. It can display or overlay up to four graphs simultaneously. C-64. $31.95.

New Classics Software

High Resolution Graphics for Pascal 80. Use Pascal to write graphics. Includes simple graphics routines, a character generator, Pascal turtle graphics, printer routines and demonstration programs. All parts of the package can be used at the same time, including reverse video. TRS-80 Models III & 4. $39.95.

Peachtree Software Inc.

Business Graphics System. Allows you to create 10 specialized types of charts for output to screen, plotter, or printer using a simple menu- and prompt-driven program. May use data from *PeachCalc* or other ASCII file spreadsheet. IBM PC, XT. $295; Osborne: $125.

Penguin Software

Additional Type Sets. 50 extra fonts and character sets, both large and small, to use with *The Complete Graphics System*. Includes old English, italic, oriental, computer, creepy, and others. Other language fonts include Hebrew, Greek, and Russian. Apple. $19.95.

The Complete Graphics System. A drawing and design package for the non programmer. Create 2-D graphic images with 96 brushes and 100 colors. Label your drawings with text anywhere on the hi-res screen. Assemble 2-D line drawings into 3-D objects. Includes special tricks. Apple. $79.95.

The Graphics Magician. Programmer's tool. Three animation editors let you design shapes, their paths, and assemble animations with up to 32 independent objects. Create hundreds of multi-colored pictures which can be stored on a single disk. Apple. $59.95.

Map Pack. The easy way to use computer-generated maps in your software or presentations. Includes outline maps of all 50 states, the U.S., Canadian provinces, and the continents to use with The Complete Graphics System. Apple. $19.95.

Paper Graphics. Print out any hi-res graphics screen using hundreds of printer/interface card combinations. Crop the screen and print any portion, magnify any area, print sideways, upright, reverse, upside down, and even label your screens with text. Apple. $49.95.

Transitions. Turn your picture disks into professional presentations. More than 35 choices of screen wipes between pictures including: spiral, radar, and geometric wipes; a windshield wiper effect; and others. Pictures are stored in packed format allowing more than 100 per disk. Apple. $49.95.

PowerSoft

Power Dot II. Graphics program for generating hi-res bit-image printouts on Epson, Prowriter, DMP-2100, color ink-jet printer. Includes full screen graphics editor. TRS-80 I/III. Bit-image lineprinter. $59.95.

PowerDraw 1. 6. Low-resolution graphics package for TRS-80. Allows graphic designs to be saved as packed graphics, basic arrays, data statements or CMD files. Fast and easy to use. Written in machine language. TRS-80 Models I, III. $39.95.

Rainbow Computing, Inc.

Poor Man's Graphic Tablet. Designed for precision drawing and tracing. Unique marking feature allows you to trace transparencies overlaid on your TV screen or monitor. Full shape table functions. Color mixing. Apple. $49.95.

Rainbow Graphics. A joystick with two pushbuttons controls all the functions and modes. Options include edit detail and a labeling mode with six fonts included. Full shape table functions. Print on Silentype. Apple. $29.95.

Scarborough Systems, Inc.

PictureWriter. A colorful and educational program that makes drawing fun. Apple. $39.95.

Spectrum Projects

Graphicom. Graphicom allows you to create, edit, and transmit pictures and text using a uniquely powerful set of graphics tools. TRS-80 Color Computer, 64K, disk. $27.95.

Strobe, Inc.

Enhanced Business Graphics. Allows data for charts and graphs to be entered either via the keyboard or from *VisiCalc* or *SuperCalc* files. This data may be plotted in bar, line, and pie charts. IBM PC & compatibles, Apple. $195.

Strobeview. Produces word charts. IBM PC & compatibles, Apple. $75.

Synapse Software

SynTrend. It is a snap to create three-color clustered or stacked bar graph, pie charts, and line graphs. Fully compatible with all Synapse applications software and *VisiCalc.* Atari. $99.95.

Versa Computing, Inc.

Versa Writer. A hardware/software low cost graphics tablet. Trace your drawing or use the many functions provided in the software. Apple, Atari, IBM. $299 includes hardware/software.

Xlent Software

Megafont II. Allows user to download hires graphics from disk to Epson, Gemini, Riteman, Prowriter, and NEC printers. Provides 12 custom fonts. Provides utility for creating fonts. Atari: $24.95; IBM PC: $29.95.

Miscellaneous

Classical Computing, Inc.

Speak Up! A voice synthesizer that is 100% software and has text to speech. Allow your Color Computer or Apple programs to talk from Basic. Color Computer cassette, Apple disk. TRS-80 Color Computer: $29.95; Apple: $39.95.

Compudata Inc.

Brother John—Church Information Management. A turnkey system utilizing a total, interactive database approach. Includes a complete census, contribution accounting, word processing. General ledger is available. Z80. $4000.

Dilithium Press

"32 Basic" Series. A series of book/software packages that contains programs (32) with practical applications, educational uses, games, and graphics. Each designed for a specific computer. Apple, IBM PC, PCjr, Vic 20, C-64, TRS-80, TRS-80 Color, Pet, Atari, TI 99, Coleco Adam. $39.95.

Fox & Geller, Inc.

Dutil. A utility package for *dBaseII* programmers, useful in formatting and debugging *dBaseII* programs. CP/M, IBM PC, Sperry PC, Victor, TI, Z100, DEC Rainbow. $99.

New Leaf Inc.

C*A*R*S (Car Analysis Reporting System). Graph and monitor operating efficiency and cost of ownership including car insurance, payments, taxes and license fees as well as repairs. Distinguishes between operating and ownership costs and provides printed reports too. Vic 20, C-64. Cassette: $35.50; disk: $39.50.

PowerSoft

Enigma. Text encryption/decryption system based on WWII German enigma machines. Incorporates modifications which make standard solutions of the code useless. TRS-80 Model I, III. $39.95.

Softsync, Inc.

Computer Mechanic. Computerized automotive instruction and diagnostic tool. Enables you to keep track of car repairs, guiding you step-by-step. Graphics explain exactly what you should be looking for. C-64, Atari, Coleco Adam. Disk: $26.95; Cassette: $21.95.

Software Arts, Inc.

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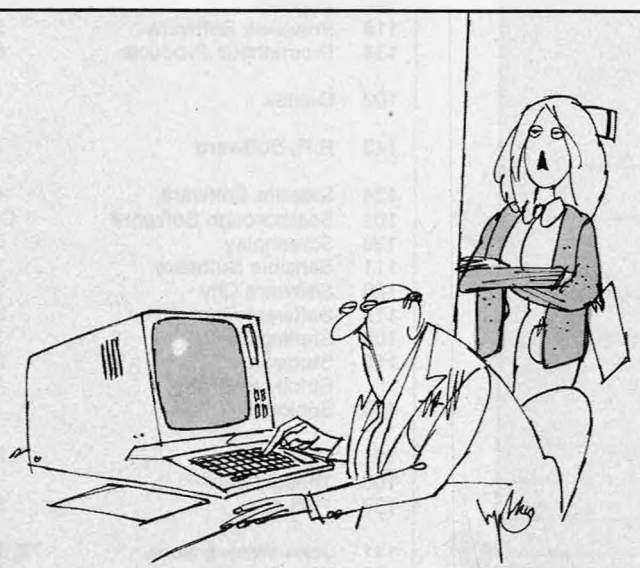

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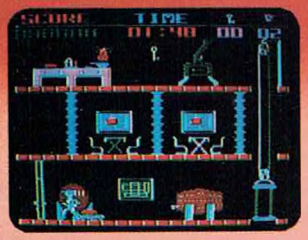

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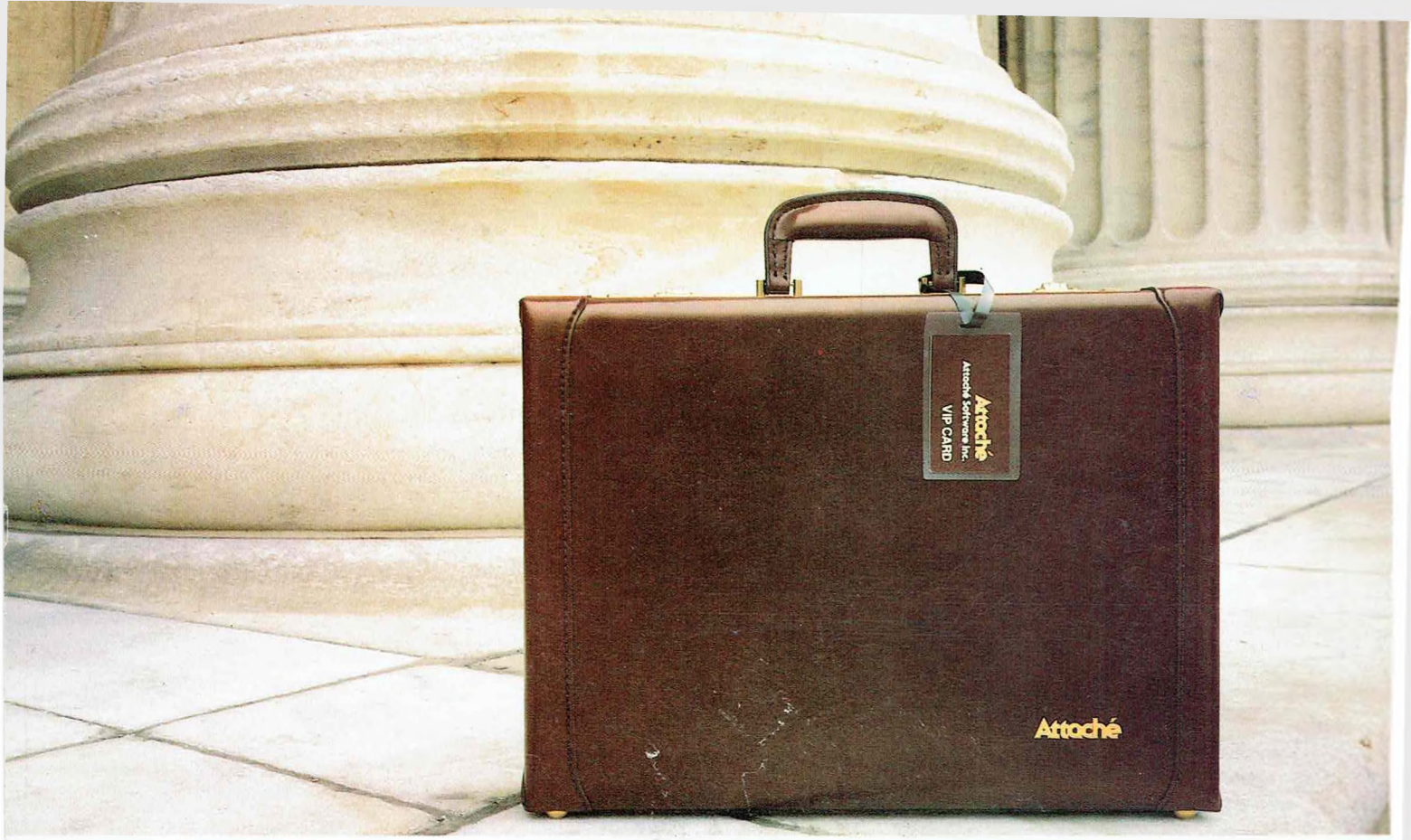

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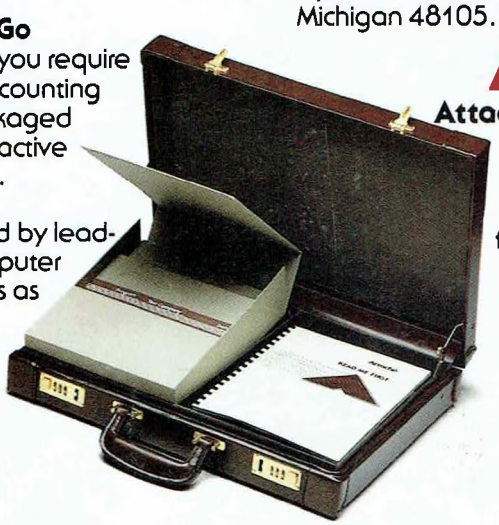

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